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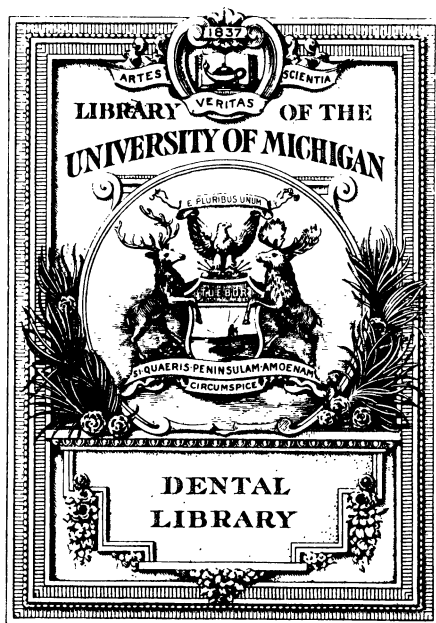
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# ORIGINAL CONTRIBUTIONS

## THE SCULPTOR, ARTIST AND DENTIST; WHAT THEY HAVE CONTRIBUTED TO KINDRED CALLINGS.

By B. J. Cigrand, B. S., M. S., D.D. S., Chicago.

*Read at Central Michigan Dental Society, Ionia, October, 1902.*

In the winter of 1900, I read a paper before the Odontographic Society of Chicago, the title of which was "Dental Deformities in Fine Art," and the generous encouragement accorded in the discussion lead me to prosecute my studium into the realms of the artist and sculptor. During the past ten years I have given this theme liberal consideration and I am satisfied that much good can come from a knowledge of these kindred vocations.



FIG. 1 PRIMITIVE FISHING.

By H. R. HYATT

At the recent meeting of the Southwest Michigan Dental Society I read a paper entitled "What Art Has Done for Dentistry and What Dentistry Has done for Art." Your executive committee was present at this meeting and requested me to prepare a paper on the sculptural side of this interesting subject and read it as the initial paper before the Central Michigan Dental Society. Realizing the honor thus conferred and fully appreciating the pleasure of inaugurating a new organization of Dental Fellowship, I consented.

No doubt all present have observed that statuary invariably presents the mouth and dental organs in a manner which appears to us careless and non-anatomical. The statuary halls of both Europe and America demonstrate that the sculptor does not fully heed the importance of the individuality of the dental organs.

In many of the world's most beautiful specimens in marble the teeth are carved to appear as sharp, sawlike instruments of mastication, resembling the teeth of a shark. In other statues the teeth are hewn in a fashion approaching tusks and do not in the least designate the proper number nor are they arranged with any anatomical accuracy, as in "Primitive Fishing," by Hyatt.

The painful appearance which the dental organs present in the high-priced art is worthy of criticism and the sculptural world little dreams of the artistic contribution it might attain by copying the mouth and teeth with the same care and patience devoted to other points of individuality.



FIG. NO 2. DEATH OF SHELLEY  
SCULPTOR, H. WEEKS

Mr. Schonfeldt of Washington, D. C., after reading my paper which I read before the Odontographic Society, heartily indorsed the idea of art and sculptural students taking a brief course at a dental college in order to acquire a more complete knowledge of the mouth and teeth. In his new book just published, entitled, "The Human Form," he devotes several pages to my deductions and concludes with this indorsement:

"Dr. Cigrand's contribution to art, with its fine specimens and well-selected subjects, together with the entire discussion of it

by eminent members of the Odontological Society, has been published in two parts by the Dental Review, Vol. XIV, Nos. 6 and 7. In this important memoir Dr. Cigrand points out the necessity of a course in anatomy of the teeth for artists and others, and justly claims that it is due to their ignorance of these parts that they ruin many an otherwise fine painting or statue. I regret exceedingly that space forbids a more extensive quoting from this far-reaching and capable production and it will undoubtedly have the effect of a reform in such matters in the realms of art by powerfully directing attention to these glaring defects."

The utility of the dental curriculum to the sculptor is obvious to all who have witnessed the exhibits at the world's expositions. Though many of the most famous works in marble and bronze are not to be seen at fairs, but remain on their original pedestals in parks and public grounds.

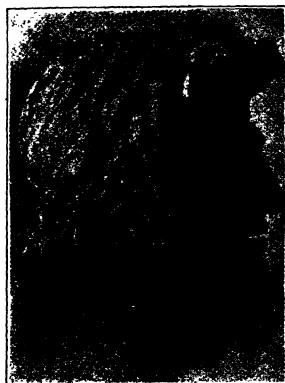


FIG. NO. 3. HEAD OF ALEXANDER

The malformations in the statues are considerably greater than I can possibly show in these pictures made from the original, since in these miniatures much detail is lost and the reduction in size causes the imperfections to vanish.

It is to be regretted that so many of the world's master-pieces in sculpture give evidence of the glaring defect in both mouth and teeth; and when I speak of the mouth I mean the expression as well as the muscular indications. Often they are represented by a mere ridge, as in "Death of Shelley," by Weeks.

The round, full and meaningless mouth—possessing no life or muscular attachments—is vividly shown in the statue, "The Birth of the Water Babies."

Very often the sculptor does not attempt to delineate the teeth—even when the mouth is considerably distended, as in moods indicating singing or exclaiming, such an example we have in the statue known as “The Spirit of Liberty,” where the two lads are happily cheering the neighbors by loud hurrahs!

Where the statue presents the figure of a man possessing a full beard or heavy mustache the mouth and dental organs do not show, as in the statue of Guttenberg, at Strassburg, Germany.

In ancient times the sculptors gave little heed to the expression of the eye or character of the mouth. The minute details of the face were not represented, possibly because little was known of the



FIG. NO. 4. QUEX GROUP

muscular attachment, though more probably because the delicacy of art was wanting. Well shown in “Head of Alexander.”

Above the door or main entrance of the Great Cathedral at Strassburg is portrayed the life of Christ and in this mammoth carv-

ing we have an excellent example of the disregard for facial outlines and expression. You will observe that all the subjects appear alike and that the eyes and mouth are very similar in all the faces.

We of to-day believe in realism. We love and adore the real, and those of us who worship at the shrine of nature reverence the divinely created. The awkward statue resulting from ignorance of anatomical outlines will soon be a thing of the past.

Many recent statues and statuettes possess these symbols, and in the days to come the cold marble and bronze will warm up and depict the cheerful as well as the tragic side of life.

In days of old the sculptural product never gave evidence of laughter, cheerfulness or delight; all statuettes and works of sculptors portrayed the serious, the cold, the firm and stern. Of this character of work the view in the department of busts of the British Museum furnishes eminent proof.

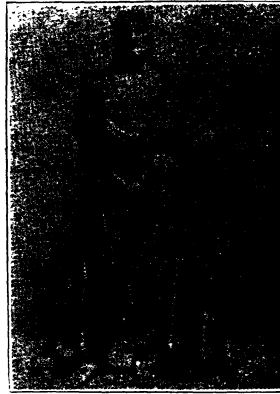


FIG. NO. 5. ÆSCULAPIUS.

The most magnificent group of busts, demonstrating knowledge of facial contours and sub-dermal structures, is to be seen in London at Westminster Abbey in what is known as "The Poets' Corner." You will observe that the eyes and mouth are most naturally carved and approach nature so closely as to be a most perfect counterpart.

In this same famous abbey are the wonderfully beautiful profiles of John and Charles Wesley, and their faces give evidence that great care was taken to preserve the lines of character as well as expression of the mouth. The miniature carving at the base you recognize as the perfection of detail.

In southern England are the famous Quex monuments, and they contain effigies which portray a remarkable degree of faciology and anatomy in particular. Besides their artistic effect is remarkable; the mouth and lips evidence a deep knowledge of the subdermal structures. Rev. Charles Boutell, a recognized authority on monumental effigies, writes in the *Encyclopaedia Britannica* these lines: "Till recently these monumental effigies were mere antiquarian curiosities, but they await the formation of a just estimate of their true worth as face portraiture. It is worthy of regard to consider the manner of these effigies, assuming an aspect neither living nor lifeless and yet impressively lifelike." The master sculptor, failed to register his name, but his chisel did his bidding as directed by a mind of scientific training.

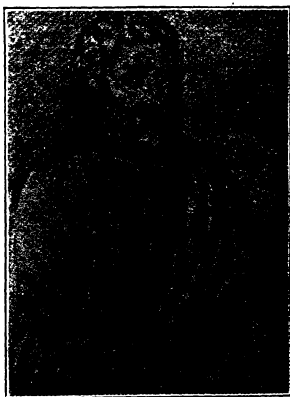


FIG. NO. 6. HIPPOCRATES.

Though the most charming statue of all, and exhibiting that unconsciousness of pose, was to be seen at the Paris exposition. The subject being a three-year-old child. The statuette was most attractive and crowds stood about it from early morn until the exit bell tolled. The statue was labled as "Little Innocence." Though the name was unnecessary, since the sculptor had so completely caught the expression of the eyes and the sweetness of the mouth that a title seemed pleonastic.

In fact the art of Paris can be appreciated only after a visit to the other art centers of Europe. In this field of digital dexterity and knowledge of proportions, the Parisians easily lead the world.

It is indeed strange that the sculptors of the past have paid no special attention or compliment to the dental organs or to any in-



dividuals of our noble profession. With few exceptions there does not exist to-day scarcely any statuary intended strictly to typify dentistry or its practitioners.

In the Louvre at Paris can be seen a bust of Aesculapius, who in ancient times gave much attention to the teeth, and his kinsman, Hippocrates, the father of dentistry, also lives in marble at this famous French Museum of Art. Galen and Pare, too, are represented in the hewn blocks of stone. But these men, only by great latitude of the subject, can be properly classed as dental practitioners—they were more given to oral surgery.

In modern times the sculptor has been called upon to chisel or carve the figures of but three dentists.

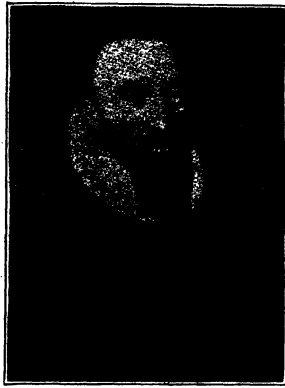


FIG. 7. AMBROISE PARK

First among these famous individuals we must mention Dr. Horace Wells, the discoverer of anaesthesia, a find which has done more to relieve suffering humanity than any score of other discoveries. Humanity owes so much to this dental genius that he deserves a statue in every city containing either a dental or medical school. Medicine fully recognizes the balm he brought for the afflicted and distressed. He it was who made possible the beautiful marble-lined surgical amphitheatres of to-day and opened the way to cranial and internal surgery and took from the operating room the hitching post and straps and bequeathed in their stead "the vapors of sweet dreams." He it was who endeared himself to all races, peoples and governments of the earth. His manly figure in statue form graces the park at his old home in Hartford, Connecticut. Besides the sculptors have engraved his likeness on innumerable tablets and busts.

Dr. Watt, who contributed a world of good to the dental profession and humanity as well by inventing a method of refining gold and discovering the process whereby it could be easily introduced into prepared cavities, gave a benign donation. He made it possible to save teeth and introduced true prophylaxis. His physiognomy lives on, and the sculptor has done a noble act.

The dental profession in the past has had a number of artists and sculptors in its ranks and they all demonstrate the advisability of having artistic inclinations and powers of execution. The dentist in the days antedating the easily manipulable rubber was compelled to do considerable carving, and it required genius and dexterity to produce dentures in those early times. We of to-day can scarcely imagine the great trials of the pioneer of our calling. Those of you who had the opportunity of seeing at the Columbian World's Fair the artificial dentures of General George Washington can get some-



FIG. 8. DR. HORACE WELLS.

thing of an idea of the sculptural genius of John Greenwood, who carved these bases and teeth from a large piece of hippopotamus ivory.

The profession of to-day is paying too little attention to sculpture and students and practitioners would grow closer to the purpose of their calling if they interested themselves in sculpture. This would be especially valuable in carving the innumerable things incidental to dental practice.

One gentleman in the East, Dr. Hitchcock, is wedded to the sculptural side of dentistry, and of him I spoke at some length in my paper before the dentists of the Southwest Michigan Society; but I add the following since it stamps him deserving of national recognition:

The following paragraph from an Oswego paper indicates that Dr. Hitchcock has made a present of one of his beautiful horns to Vice-President-elect Roosevelt:

"Dr. Thereon S. Hitchcock, the east side dentist, who is also a carver of reputation, presented Governor Roosevelt with a fine black Texas steer horn, upon which were carved pictures of 'Teddy' in the garb of the hunter, ranchman and rough rider.

"The workmanship was of an exceptionally fine character, the colors of the horn, black and white, appearing in the faces and figures to the greatest possible advantage. The presentation was made at the O. & W. station just as the governor got into his carriage. He had a brief but pleasant talk with Doctor Hitchcock, during which he thanked the doctor and said that he would add the gift to the curiosity shop he already possesses."

It has often occurred to me that there should be a "probationary course" in a dental school, and that if students did not develop or give evidence of possessing artistic and mechanical ingenuity at the end of two years' instruction they should not be permitted to go on with the study of dentistry regardless of how high their standing might be in the theory, and that after having been adjudged incapable the several dental colleges should be informed, thus preventing him from becoming a dismal failure. If such a proceeding could be instituted and justice and equity shown, the human family would be benefited and the rejected candidate receive mercy through some other channel more congenial to his talents. As it is, we hold him, take his time and charge him fees to lead and direct him to the poor-house; while, had we after observing his lack of artistic and mechanical inclination, graciously ushered him into life work suited to his character, disposition, and talents, he might have gone on and become a shining light in law, theology or kindred calling where the artistic is not a primal requisite.

If we are truly interested in the health and comfort of the communities, can we close our eyes to the present condition? If we are earnestly striving to keep abreast of the times and be peers among those who have intrusted to their care the welfare of the lower third of the face, we must reach out into common fields and profit from kindred professions.

## PROPHYLACTIC ITEMS.

By R. B. TULLER, D. D. S.

*(The first of these items began in the July number.)*

What do you know about microbes?

You may ask what I know about them.

Well, I ought to know something about them.

My daily occupation is in a hot-bed of them.

So is yours. Millions of them.

But did you ever see one?

Did you ever spike one on the end of an instrument and holding him up to a good light take a look at him?

And looking at him could you tell whether he was a good Injun—I mean microbe or a bad one—pathogenic or non-pathogenic?

Well, a good many of us have nearer that conception of him than we have of the real thing.

He is our unseen foe.

He's hard to stab.

And the more you stab him the worse he gets.

He'll give up to fire if it is hot enough—and kept up long enough.

He's hard to isolate.

Not only from his kind, but from many other kinds both pathogenic and non.

That isn't exactly our business, anyway.

It is our business to do a little something in the way of suppressing him—if we can, knowing he is there.

A little is all we can do.

O, we can do a lot, but we can't annihilate him.

Untold billions have been slain and never have been missed.

When the last one is dead a lot of his friends come from somewhere to the funeral.

It is strange but true.

An important feature in our business is to not only suppress him as much as we can, but guard against transferring him to new fields and pastures green—or red.

The practice of ordinary hygienic measures—thoroughly cleansing our instruments and whatever else may be contaminated to carry from one patient to another, does wonders.

How many comprehend the value of running water?

It is of the greatest importance.

If it is hot or scalding water, so much the better.

We in city offices where hot running water is supplied can congratulate ourselves.

In running water, whatever may be dislodged (visible or invisible) by use of soap, brush and water, is carried away.

In a basin the bacteria are floating about ready to jump on again. O, persistency! thy name is microbe!

By all means have running water.

If you have to get your wife to pour it from the tea kettle spout.

It should, of course, be good, pure water.

Now, just to illustrate:

Suppose you pick up an instrument that has 1,127,304 microbes stuck to it—good, bad and indifferent.

O, no, that's not many.

Not when 5,000 or 6,000 can play ring-around-a-rosy on the point of a fine cambric needle.

O, you must get used to large figures in the field of bacteria.

Now, then, working under running water with soap—pure, and brush—sterilized, you dislodge at the first rub say 578,942.

That's over half, but not too many.

You know you often dislodge most of the visible debris, which carries most of the microbes, the first sweep.

The next rub you take off say 310,413. Same way of reasoning.

Next, 100,132.

Next, 99,031.

Next, 18,111.

Next, 10,780.

Next, 7,001.

Next, 1,329.

Next, 824.

Next, 320.

Next, 199.

Next, 111.

Now, there is 111 still remaining. You have dislodged 1,127,193 without much effort and the running water has carried them away.

But 111 are sticking. Nothing like being exact in figures.

Scrub away, you can get some more. Perhaps 68.

That leaves 43, and they are lodged in the minute recesses—microscopic recesses.

If they can find anything to eat they will soon recoup their little losses. Always something doing.

But it is worth something to get down to 43.

What shall we do with them?

If we could catch them one at a time we could butcher them.  
But they are shy.

We might "pizen" them, but how would scorching do?

It is all right if you don't scorch your instrument and spoil the temper.

In preceding items I think I told you how to use alcohol in burning them off.

Many instruments may be safely dipped in alcohol, removing drops and surplus that would make too big a blaze and then quickly dart into your lamp flame and out, letting the alcohol then burn off.

Alcohol evaporates quickly, so it must all be done quickly to get results.

If you are careful and use good judgment you won't injure instruments.

If you don't want to try that, and it cannot always be consistently done, you can use a good sterilizing fluid.

Last of all, leave them dry.

Bacteria must have moisture with other conditions to increase and multiply.

If we can't kill every last one we can dry them up and keep them from increasing.

Prof. Geo. W. Cook says that chloroform is an excellent sterilizer. He knows. So do I.

Dip instruments after cleansing into chloroform and let it evaporate. That dries them.

That's a humane method; anæsthetize the little jiggers before putting them to the death.

Well, now, after this if you haven't got rid of the last lingering microbe you have "done noble" anyway, and reduced chances more than a million times.

Boiled microbes, if *well done*—not rare—are not likely to give much trouble, but we cannot boil all our instruments conveniently nor consistently.

We want to sterilize cavities of decay frequently before inserting our filling, but we can't boil them.

But speaking of chloroform, we can use that.

It is one of the best things, and its rapid evaporation dissipates moisture, leaving cavity dry.

When rubber dam is in place chloroform should not be allowed to come in contact much with the narrow and tense portion of dam between the teeth. It will soften and break and produce leakage.

Absolute alcohol is good to wipe out a cavity with, too. It takes up moisture and does not affect rubber.

Absolute alcohol can be easily made and kept absolute for a long time by putting shreds of gelatine into the bottle.

It takes all water out of 95 per cent alcohol.

Chloroform is an excellent thing for the dentist—not the patient—to use in cleaning the teeth.

A pellet of cotton saturated and held in the pliers can be manipulated around teeth, especially at necks, by a careful operator without producing ill effects in any way.

Chloroform cuts and clears away greasy films that perhaps have not been otherwise dislodged.

Chloroform, q. s.

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## THE EDUCATIONAL OUTLOOK.

BY C. C. CHITTENDON.

*Read before Wisconsin State Dental Society, July 16-17, 1902.*

In view of the fact that many things have been occurring of a more or less interesting and sensational character in connection with your State Board of Examiners during the past few years, it is but reasonable that the profession of Wisconsin at large should be rendered an accounting by the board of what it all means.

Factions have sprung into life, hard words have been said, criticisms have been freely offered, all sorts of ulterior motives have been attributed to your examiners, and attempts have been made even to bring before this society for an airing the grievances and complaints of individuals and corporations against their attitude or actions in certain premises.

Such things are naturally disturbing and often misleading, and it is greatly to the credit of the dentists of the state, and a still greater compliment to your examiners, as an indication of your trust and confidence in their official integrity and sagacity, that we have been able to finally arrive at this time and period of rest and honorable peace in a safe haven,—this time of our thirty-second annual gathering, when, with the main battles fought to a successful termination, we dentists may meet peacefully together, and listen to a recounting of the campaigns, the details of the contentions, the objects sought to be accomplished, and best of all, to round up the results actually accomplished and made permanent for all time. As in all contentions for principle the time has doubtless often seemed long, and to many (not fully understanding) the efforts futile and costing more than the result promised, yet only after it all has happened could it be possible for us, as representing the legal watch-

dogs delegated to guard the standards and best interests of your chosen profession—to present for your inspection and approval or criticism the results of our labors under the title of the present “Educational Outlook.”

Many of you will recall that in 1898 the National Association of Dental Examiners met in October at Washington and that among other important things done there was the adoption of the since celebrated Rule VIII, which declared in effect that colleges, to be recommended to state boards for recognition as “reputable,” should matriculate no students who did not possess educational preparation equivalent to the entrance to the third year of a High School.

Thirty-five of the forty-seven schools then on the list practically accepted the terms, the other twelve stood out and, as they expressed themselves, “refused to be dictated to.” As a result the Wisconsin board, seeing no other course open to them as honest public officials, refused to license the graduates of those twelve schools without examination. Immediately followed the Diamond mandamus proceedings in 1899 against this board. Pending the trial of the suit the two national bodies of Examiners and Faculties in session at Niagara that year after a ten days’ session of joint conference, came to a compromise standard for 1899-1900 of admission to second year of High School for matriculation, whereupon the colleges withdrew the mandamus suit against this board. At this session also the requirement for 1902-3 was raised to the original standard of Rule VIII, viz: Admission to third year of High School.

So it will be seen that through much tribulation, some disagreeable litigation and after three years’ delay, the proposed minimum standard of Rule VIII will go into effect at the opening of the coming school year.

But, gentlemen, this is not all that has been established by that contention. The Examiners assumed that they had the legal right and power as public officials and guardians to set and prescribe educational standards and methods within reasonable bounds. This many of the schools denied, and one, the Wisconsin College of Physicians and Surgeons’ Dental Department, went so far as to dispute it with the Wisconsin board in the courts.

You have each and all received copies of the State Supreme Court decision on that contention, which was handed down last January, and which sets at rest forever the question of the board’s powers and limitations. In passing it is only fair to state that this Wisconsin school, on learning the decision of the highest legal authority in the state, came frankly and manfully forward and



placed itself in the hands of the Examiners for their guidance, criticism and supervision, pledging itself to build and follow on the lines laid down at whatever cost to themselves, in the future conduct of their dental department, and I am glad to report to you that up to the present they have more than fulfilled the promise made and the board has already given its official recommendation of their application for membership in the National Association of Dental Faculties.

Schools may perhaps in the future pursue their own sweet will as to their general methods and standards for receiving, teaching and graduating their student, but when that student wants a license to practice in this or any other state he must convince the examining board that his education was received at a school whose methods, standards, facilities, teaching faculty, curriculum, in fact whose entire plan of educational conduct is fully up to the established rules and criteria of reputability laid down by the state board, and that he himself actually possessed the preparatory education required by the board at the time he entered college. A new era in dental education is dawning. If you have kept in touch with the dental literature of the day, you must be aware that the dental world is full of activity in the discussion of what constitutes a proper educational outfit, and how it can best be imparted to and made successful use of by the student.

Our honest educators are fully alive to the defects and shortcomings of the past and are using all their powers to secure better things.

The examiners, while not posing as authority on educational methods, have for the past five years been hammering away almost exclusively to prevent colleges from matriculating men who, by reason of their lack of preliminary mental training, are incapable of assimilating what the colleges are ready and anxious to teach them.

To the satisfaction of every honest man in the profession—the teachers as well as the practitioners—they have succeeded in having given them by the courts, the absolute censorship in this matter, as well as many others, over the college output, as to its fitness to be turned loose on the community.

And your state board, acting under and in pursuance to the judicial powers defined by the courts under the statute, has adopted and put forth a set of rules defining as clearly as possible their official estimate of what constitutes a “reputable” dental college.

These rules are the codification and adaptation of the accepted national and interstate standards and have borne the criticism and

received the unqualified commendation of many of the leading dental educators in the world, and are undoubtedly, as the court expresses it, strictly "within the bounds of reason and common sense," and will therefore withstand any reasonable assaults.

To recapitulate, the "educational outlook" shows us that today we have: (1) The minimum educational requisite for matriculation in a dental college that is to be considered "reputable" is admission to the third year of High School or its equivalent, the decision as to the value of credentials as well as all examinations to be in the hands of an acceptable accredited appointee of the State Superintendent of Public Instruction—one who is entirely outside of any dental college. (2) For 1903-4 the dental college course, for graduation, will consist of four years' courses of seven months each. (3) The last year saw at Ann Arbor the initiation of the college standard of High School graduation for matriculation and four years' course for graduation, which there is no reasonable doubt will very soon become the national educational standard as a criterion of reputability of all dental educational institutions in the United States. (4) And there is no question that when we have placed the standards of this country where they rightly should be, we shall have set the pace for the rest of the world.

Our dental laws are ample to protect all interests in every state without the enactment of a single new statute or the repeal or modification of any now extant. Let those who doubt this carefully study into the real conditions and, like your essayist, I feel sure they will be converted from doubt to sure conviction.

Now it only remains for you, gentlemen of the profession at large, you, the workers in the vineyard, bearing the heat and burden of the day—coming as you do hourly and daily in touch with the knowledge of what the servants of the public most require and lack in dental educational methods and training—it remains for you, I say, to set the pace for college standards in curricula, technique—in everything. I feel certain that whatever the whole profession really intelligently demands the schools will only too gladly furnish, for the schools and the examiners are as truly your servants as you yourselves are the servants of the people in your several communities.

In making this report of the situation at the present time I have striven to suppress all mention of matters personal or of a character calculated to air the private difficulties and contentions of your state board in their efforts to aid in the accomplishment of the results herein chronicled, and rather ask your indulgence while expressing my personal and heartfelt thanks and appreciation for the help and

encouragement almost universally displayed by the dentists of Wisconsin and especially by my official collaborators, one and all.

DISCUSSION ON C. C. CHITTENDEN'S PAPER.

Dr. Arthur Holbrook, of Milwaukee, was called upon to open the discussion.

DR. ARTHUR HOLBROOK: There is nothing to open, as I see. I can endorse all that has been said. I am thankful that I was here to listen to what Dr. Chittenden has read. We have worked together for thirty-two years in this society, and a few years before that without a society; so that I know and appreciate all that Dr. Chittenden has done, and what he has intended to do. However much I may have differed with him at various times, I have always felt that his heart and soul and strength were given to this work; and the state of Wisconsin should stand up as a man and feel grateful for the work Dr. Chittenden has done to advance dentistry in Wisconsin. No other one man has given as much time or as much energy and strength, and such moral support to it. There is nothing in his paper that we can criticize. There is nothing to discuss. It is simply something that we all known and appreciate. The many things touched upon should set us to thinking; they are applicable to me and applicable to all of us. We all feel their force. The only thing is for us to accept what he has told us, and to move forward, keeping our heads, our hearts and our hands together, united in this great work. It is pretty difficult to get up here and say anything about the state board, which has had so much to do and so much to say, and has interested us so much in the past few years; but we know that the result has "set the pace;" something has been established. There is something tangible now before us; and however much we may have differed, we must simply accept it, and believe in it, because we believe in the men who have had it at heart. If I didn't believe in "Charlie Chittenden, I wouldn't get up and say this. Now, as to this matter of standard, most of you are acquainted with my standard and with my feelings in regard to it. It is unnecessary for me to say anything further. I thank you and thank Dr. Chittenden.

DR. E. C. FRENCH: It is always valuable to set your standard high. I believe that the "powers that be" have made a standard that is reasonable. It is true that in the past, as it will be in the future, the students who enter a dental college to begin a profession will not all reach the standard that we now have—that is prescribed. Standards do not make dentists. A certain proficiency in education that will admit a student to the association of colleges, will not make

dentists of them. While I have always considered the Minnesota law as arbitrary in many respects, yet, nevertheless, it is a good system for the students that make application to practice in Minnesota from the different colleges. Some argue the point that the students who have gone through the schools, or the schools that are in the Association, and have passed the examination and have a diploma, are entitled to practice anywhere in the United States. It seems as though that ought to be a sufficient pass-port to go anywhere in this country to practice dentistry. I know of students who have passed a good examination from good schools, who have gone before the Minnesota State Board and fallen down. Now, we all know that the man with this school experience, it matters not how bright a boy he may be, or how proficient he may be as a graduate from a school, he is not a dentist; but I do believe that that boy should have the right and privilege to stop where he pleases, in whatever state or whatever community, and given a show. I do not believe there is any state board within the United States that is competent to judge whether a boy will make a good dentist, or whether he can practice dentistry. They will only approximate it. My experience on the State Board of Dental Examiners for the state of Wisconsin goes to prove, in my own mind, this assertion. I know of applicants in the state of Minnesota and in the state of Wisconsin that would pass, when I was on that board, that could answer every technical question put to them, that could not practice dentistry any more than a cat. There wasn't the first element in them to make a dentist. I know of some that are practicing in this state today, and I am sorry now that I ever signed my name to a license for them to practice. They were honest and very anxious to do their best, but they cannot do anything. Now, I have come to this conclusion: That the community in which they practice will soon settle that question, as far as the practitioner is concerned. They will not practice dentistry if they cannot make a living out of it. I think the Board of Examiners in the different states are an excellent thing. We are not here to criticize their methods of examination. We know they do not have the time to find out whether the student who has graduated from a college is qualified to practice dentistry. Give them a little time, and with experience they will be all right. Unfortunately for me, what little I know I got in the school of experience. I started out to practice dentistry when there were very few students who entered dental colleges. It was only those who had money to back them up that got through. I didn't have it. I was under a good preceptor. I took up all the branches then being taught. The text books.

I tried to master as far as I could. What I got in a theoretical way was explained to me in a practical way under my preceptor. I believe in the schools, but I think that every boy, before he enters a dental college, should have some experience under a preceptor that would demonstrate whether he could make a dentist or not. I think the time will come when a law will be passed, or a rule adopted in our schools, that they will not accept any boy in a dental college until he has been under some preceptor; and he comes to that school with a recommendation from that preceptor, and at the time he comes he shall present some piece of dentistry that will show, somewhat, his mechanical ability to construct a piece of dental work. Then we will not have so many that are going into the schools that will never become qualified to practice dentistry.

I have enjoyed Dr. Chittenden's paper. I appreciate very much the hard work that Dr. Chittenden has done, and I am glad, for one thing, that this question in our state is settled. There is no more quarrel over it; it has been settled fairly and squarely; and I think with the exception of a few instances there has been no personal feeling. I have been appealed to as a member of this society, from both sides, and I am happy to say that I have settled this question in my own mind, and I have been with the board first, last and all the time.

DR. SCOTT: How does our law compare with the laws of other states?

DR. C. C. CHITTENDEN: If I had time to give you the round-up of a paper which was read last month, I could show you exactly what the difference is. I will say that all of you will have a copy of it as soon as the re-print is out. I would like permission to present that phase of the law, and the comparison of the different laws of the different states. The laws differ in a good many essentials, one from another; but thirty-five of the forty-seven laws all have the word "reputable" in them in one form or another, as a criterion of character of the school. The decision of the Wisconsin Court, lately given, places the judgment as to the reputability of schools in the hands of the board, absolutely. The question of reputability is not one of something else, but it is a question of "reputability;" a question of fact as to the character of the school, whether it is a satisfactory school in the judgment of the board. Thirty-five of the states and territories of this country have that one thing which makes their laws all practically of the same value. There are twelve states whose laws do not mention it. Six New England states are among them. This paper I am going to send you a copy of shows you the facts.

There is no question but that there can be an absolute uniform interstate national standard adopted by the boards themselves, and I think I may promise you that it is pretty sure to come within the next year or two, on the basis of that word "reputable." The twelve states having no mention of colleges have absolute control of what constitutes a fitness to practice; and those twelve states can, each one of them, give, if it chooses, whatever value it may decide to place upon the possession of a diploma from a reputable dental college, as part of the examination they require. So, if the different boards will join together and adopt the uniform criterion of what is a reputable dental college, adopt rules that will define that—not have it a rule of the National Association, but let each state adopt the rule, as Wisconsin has done, as Illinois will, and as I expect to see a dozen states in the coming month do—when that is established we have an interchange of license, and the thing is all moving exactly as it should go. When you get that re-print of mine I trust you will be kind enough to read it. I want you to understand what we have been doing, and what is promised for the future.

DR. E. C. FRENCH: There is a point which has been open to criticism. Now, one board may say that a certain college is a reputable college. The board over in another state—their idea of a reputable college may be entirely different. Now, when we can get to that point in our licenses, that one license shall be good in another state, we are on the ground that I have been fighting for and agitating for many years; ever since they began to get laws governing the dental practice in any one of the states.

DR. C. C. CHITTENDEN: That can only be obtained when an agreement can be arrived at as to what the minimum shall be. This paper I read today undertook to show you what the national standard will be very soon; high school graduation and a four years' course. That is the standard of the state of New York today, and the standard in the state of Michigan; the highest standard in this country anywhere. When that becomes the established standard this problem is solved and we have set the pace for the rest of the world.

DR. ARTHUR HOLBROOK: Do the state boards grant licenses to graduates from dental colleges without examination in all of these states?

DR. C. C. CHITTENDEN: No, Minnesota does not; there are several other states that do not. New York does not.

DR. ARTHUR HOLBROOK: Do they do it in this state?

DR. C. C. CHITTENDEN: We grant licenses without examination, to graduates from reputable colleges, certainly.

DR. ARTHUR HOLBROOK: All the boards and colleges in the land cannot make a reputable dentist. It has got to be in the man. You can take a newsboy in the street and make a dentist out of him. You may make an excellent operator out of him, or an excellent dentist, perhaps; but if you are going to elevate this profession into one of the great learned professions of the world, there is something behind that. A high school education will not do it. That is all right. We all understand the value of a high school course; but if I have a son that I want to go into my office to practice dentistry, it is money in my pocket if I will take him out at the end of his second year in high school and start him in the office, and then put him through a three years' course in a dental college. That is money in my pocket; but is that elevating dentistry? I say, when I take that same boy and put him through high school, I am not satisfied with that; I put him through the university, four years more. He comes back then to me to go into the office. After six more years' work—spending six years' time, what does he get? What do the state boards say to him? What do the colleges say to him? Are you any better for it? He has passed his curriculum. He has got his degree from the highest college in the land; what is it good for before a dental board? Or before a dental college? Six years of hard work in the laboratory and a course in biology with the ablest professors in chemistry; what is it good for? Are we encouraging this young man to take a course through college before going into dentistry? It is simply this: If these colleges and these boards would take those things into account it would be a different thing. I am right there myself. My boy is going through college just the same. I am not kicking; because I mean that he shall go through college if it takes him ten years; that is my purpose; but we want to have in dentistry the class of men that will bring dentistry up to some level. We are not going to do it by boards or by colleges until we get the material there to make these men out of. If you want to enlighten a man what are you going to do with him? The boards are working along the right line. It is simply our business to back them up, and back them up solidly; only go further and let the boys go to colleges. My friend Peck there is running a dental college. Let him see that these young men are encouraged to take something beyond the high school. What encouragement is there to me to send my son to college, to spend perhaps five thousand dollars to take extra studies and five years extra time? It is simply to make a better man of him, to broaden him out; give him larger ideas and get him ready for a greater place in life.

I am sorry to take your time, but this is a subject that affects me,

and affects me personally. I want you to feel that I am heart and soul with the board; but I want you to feel that the board cannot make a reputable dentist. He must have it in him in the first place.

DR. G. V. I. BROWN: It is with a great deal of pleasure that we see a prophet get some honor in his own country. I want to say to this society, though, that when the various members go to the National Association—which I trust many of you will—they will find that the members of the Wisconsin State Society are everywhere respected. They are respected because the work of the board of the State of Wisconsin is appreciated in every state, by every board and by every state society. The decision of the Supreme Court, that has been referred to, makes a standard for once at least; perhaps not for all time, because I believe, with Dr. Holbrook, that we will have yet higher standards. We now have a standard. There never was one before. The decision of the Court is going to be followed by the boards of law examiners and medical examiners and other examining boards appointed in the same way. The other day, in Saratoga, at the American Medical Association, we took up the question of reciprocity. The same demand is made in the medical profession, for an inter-change of licenses. At the present time the man who has stood the brunt of battle, the man who has in societies and out of societies given his time and labor and money to up-build this standard, has helped raise money to support laws and enact laws and re-enforce the action of the board afterwards, finds himself where? He is out of it all; he is bound hand and foot to the state where he happens to live. The young man who comes out under an entirely new environment and better advantages can very readily go from one state to another and pass the examination, and there is no hardship. That man who has been practicing many years finds himself out of it. If we are to have a standard that is lasting—and that is what Dr. Holbrook means—it is a standard comprised of men who have a university degree, who are educated men, gentlemen, and men also who have earned, as every right living man in every community earns, the right to become one of the aristocracy, whether social or professional. The old settler is one of the aristocracy by reason of having made a place for himself in his community. That man is going to be recognized. He cannot be recognized by tearing down the standards and leaving them down for unworthy men; but he can be recognized by higher tribunals. In both medicine and dentistry you will see a board which will be national in its character; which, when it grants a license to a man, will give him a right to practice in every state; a board which will supervise the examination in each individual state, and the dictum



of which will be the standard in all states. That time is coming, but I want you to remember that the greatest step taken for many years has been taken by the Wisconsin State Board of Examiners, through the Supreme Court, as a result of your labors.

I think you all know that I helped draw the law in Minnesota, and helped pass it. For six years I was on the board, and helped fight its battles. Sometimes we got knocked out. I have seen that law subjected to such abuses as few laws have been subjected to. There was a small sum necessary to be paid in the state of Minnesota. As the Board has proved venal under such circumstances the law is the most dangerous law you can have. Under the decision of the Supreme Court at the present time the Wisconsin board has the law adopted by Minnesota without the possibility of abuses that the members of that board could undertake, if they wished. The board in Wisconsin must be "reasonable," says the Court. It must have a reasonable standard, which is a standard in accordance with that adopted by other similar institutions. It seems to me at present we have reached a very good stopping place. We have accomplished a great deal. Such ideas as have been suggested by Dr. Holbrook are in order. If we are going to have a standard let us have a high one, and try to build as near that as we can.

DR. ARTHUR HOLBROOK: Don't let me be misunderstood. My point is that if a young man does take this college course let him get some credit for it, and not throw it away. What encouragement are we giving the bulk of the young men to come in?

DR. R. E. MAERCKLEIN: According to the laws of the state of Wisconsin that we have at the present time on our statute book, there is no encouragement given to a young man to graduate from the University, and graduate from a four years' college course. He is put upon the same plane as the man who just passes the State Board examination and has no college education. A man can go up before the State Board and take his examination, and if he passes, he has just as much legal right to practice in the state of Wisconsin as the graduate of any college has.

DR. G. V. I. BROWN: That matter lies in the hands of the Board of Examiners. If that be true, the law gives the board the power to correct that evil.

## ABRIDGED RESUME OF THE NORTHWESTERN DENTAL ASSOCIATION.

BY B. J. CIGRAND, M. S., D. D. S.

Continued from Page 366, Vol. 1.

The succeeding speaker was Dr. John S. Flagg, of Boston, who read one of the ablest papers ever presented for consideration before the Northeastern Dental Association. It was a paper which showed the result of careful research and study and furnished the members with new ideas for thought and consideration.

Dr. Flagg called the attention of the association to the necessity of dentists taking up the study of psychology and its co-related subjects. He dwelt especially on the necessity of a more complete knowledge of the mechanism of the brain and entered into the subject with an earnestness which fully demonstrated his familiarity with it. He fully illustrated the electrical centers, showing the functions of the ganglia and their innumerable wires of diversion.

It was a paper in every way worthy of the consideration of a scientific body of men. The psychological phenomena with which he dealt was extremely interesting throughout, and to any dentist who is truly anxious to uplift and dignify his calling the paper will render incalculable service. The lecture as a whole was a scholarly and scientific analysis of the brain centers and functional cells.

The lack of discussion at the close of Dr. Flagg's remarks was probably due to an unfamiliarity with the details of the subject he so ably handled.

"Diet in Riggs Disease" was the subject selected by Dr. J. Warren Achorn, of Boston. In substance Dr. Achorn commented on how few people in this generation realize the importance of properly selecting a diet congenial to their living organism. Dr. Achorn gave a splendid demonstration of how many otherwise strong constitutions will deteriorate through the injudicious choice of foods.

He laid great stress on the fact that foods which may be perfectly agreeable at one period of life may be poisonous and entirely contraindicated at a future period. His ideas relative to the necessity of a more complete understanding of the essentials which enter into the various foods was convincing and scientific. He dwelt with considerable emphasis on the necessity of greater care being employed in the selection of diet where a person is conscious of existing disturbances. Many of the lesions of the physical body can be directly traced to the injudicious employment of poor foods.

Riggs disease, in the successful treatment of which Dr. Achorn considered the question of diet of paramount importance, is known

scientifically as pyorrhea alveolaris. It is not an uncommon disease and is manifested by the loosening of the teeth in their bony sockets.

The disease is superinduced by the use of foods which are freighted with uric acid. This injurious acidity of the food induces a retrogressive process affecting more especially the osseous tissue of the human economy, although it is also evinced in the vascular mechanism. Dr. Achorn cited a number of interesting cases in which by the mere change of foods free from uric acid the disease not only gradually vanished, but a permanent cure was effected, so long as the dieting rules were observed.

Dr. Achorn held that Riggs disease was a constitutional disorder, not being merely delegated to any of the primal systems which make up the body, but rather affecting the entire economy. His observations led him to believe the American people were indulging in too much tea, coffee and cocoa, these beverages possessing an abundance of uric acid.

He recommended that tea, coffee and cocoa should be sparingly taken, and suggested as substitutes water, milk, buttermilk and white wine.

In the discussion that followed the reading of the paper commendatory opinions were expressed relative to Dr. Achorn's ideas. Few gave any credence to the idea that the disease was induced by local agents. Among those who discussed the paper and added new thoughts to the excellent contribution were Drs. Flagg, of Boston; Marshall, of Boston; Cigrand, of Chicago, and Power, of Providence.

Miss Annie L. Blalock, of the Emerson School of Oratory, Boston, presented a splendid paper on "Physical Culture and Its Application to Dentistry." Miss Blalock is an attractive and interesting speaker. She has a charming presence and her enunciation was clear and distinct. She handled her subject in a masterly manner and showed her entire familiarity with it.

Her plea was for a higher regard for the physical being, after the style of the Grecian idea, of admiration in the perfection of bodily forms, rather than in the Roman idea of the worship of brute forms. She selected St. Paul as the grand model of a physical man coupled with the man of character. She spoke of the subjugation of the physical to the mental.

Physical culture was applicable to dentistry from the fact that dentists are men of the world who should be educators and molders of public thought and, in this capacity, enhancing an appreciation of the divinely physical. She explained the true meaning of physical

culture, which she characterized as the art which enables one to clearly express by facial outlines that which engages the mind.

The necessity of observing more closely the physical condition of patients she emphasized as deserving of greater consideration at the hands of the dental profession. She enumerated a number of instances where dentists who disregarded this principle induced a variety of nervous disorders. The truth of this statement must not be underestimated, since the cure of a bad tooth and the invocation of a nervous disease has sometimes been more productive of harm than good. At the close of her remarks Miss Blalock was heartily applauded.

Dr. Wicksell's subject was "Uses of the Mouth," and he said in part: "We are servants of the mouth and with us are two-fifths of the human race, who, from the farmer who raises the wheat and the beef to the cook who puts the same before us, more or less fit or unfit for the mouth, constitute a vast army of the very busiest of workers. The best cooks are the Chinese. For thousands of years the Chink has compounded his sauces and brought together the meats and vegetables that are compatible, so that a Chinaman with indigestion is not to be found.

"Though we practice from the day we put our toes in our mouths to the seventieth birthday, we must confess that we know little even of the proper use of our mouths in the selection of quality and quantity of our diet. A thousand people are suffering from overeating to one who suffers from hunger. A fast will cure more ills than any other remedy known.

The mouth is the organ of prehension. The first inspiration of the child is to try all things as to their desirability by the mouth. And you have all seen the dirty nickel between the sweet lips of a woman on the trolley, which shows this trait. Then there's the habit of putting the pencil in the mouth, which never improves the pencil. The bookkeeper holds his pen in his mouth while he finds the page. The old man feels the words with his lips while he reads the paper.

"A microbe lingers in the kiss, you say.

"Yes; but he nibbles in a pleasant way.

"Better than in the cup or telephone.

"Better to catch him kissing and be gay.

"Many a man has been all broken up by one little kiss. But this never can discourage the practice, nor should it. An old man I know said he had only one regret—that he had not drunk more rum when it was nine pence a gallon. I have but one regret—that some of the girls I knew in my school days escaped unknissed.

"On the mastication of toothpicks and hay I have devoted a

whole chapter of volume one of my new work on the mouth. The American habit of constantly masticating something is the result of early training or lack of it.

"The delicate tastes of vegetables and fruits are all lost because by use of salt, tobacco and other deadening agencies the nerves refuse to record any tastes to anything not drenched in salt or other condiment. John L. Sullivan was never welcome in a restaurant because he used an entire bottle of sauce on his steak. He had no idea of the flavor of the steak itself. If the dulling effects of tobacco on the nerves of taste were known it would lessen the use of that drug. I mean the abuse of it. The mouth is an organ of respiration, too. for can you not breathe through it? But it don't look nice, even when you are asleep. Better not.

"After all, is not speech the grandest use of the mouth? I say of a friend, 'He is a brick,' and, by the way, say this often and it will improve the shape of your mouth. Say all the good you can, even strain a point to do it; nothing brings so sure a return.

"No man can calculate the effect upon history of a single sentence spoken at the right time. Mr. Baer speaks of himself and his confreres as those Christian gentlemen into whose hands God in his infinite Providence has placed the interests of labor in this country.' The words are indeed timely. They should be memorized by every citizen and child and should be printed in large, ecclesiastical old English type and hung in every home and workshop. They are epoch making.

"No words ever were spoken in this country or perhaps in the world which make more for democracy; which arouse in every thinking mind the question, 'Where are we?' when 80,000,000 of free people have to submit to the self-interpreted rights of property of six of the most selfish and unreasoning men ever spawned on earth. Let all the workers of the earth thank heaven for the words of Baer. He has done more to help the cause that Henry George lived to inaugurate than all the single tax orators in the world. The longer the six hold out the more socialists of every stamp will show themselves on election day. I mean by socialists those who will ignore party lines and, like the people of Toledo, O., make the man mayor who will do the work of the office without regard to his being a tagged man of any party.

"We are constantly weighed and measured by the words of our mouths. Let us then seek good words and those that carry joy and encouragement. The mouth is the organ of pantomime. How expressive is the mouth in silence. The Greeks perfected plays in which no word was spoken. All emotions were brought out by

facial expressions. I wonder if it is a trait of dentists or a habit of mine to watch the mouths of people instead of the eyes? The mouth in expression tells me the thought of the person more than the eyes or the words themselves."

Following this paper Dr. Cigrand read a paper on "Manducation, Mastication and Articulation." The essay had forty stereopticon views. The illustration and complete article will appear in the *Dental Cosmos*. The majority of the paper, without diagrams:

"During the past ten years my work in special lines has induced me to make careful notes as to the movements of the inferior maxilla in its contribution to the process of mastication, manducation and articulation. In the winter of 1900, while a guest at the Odontological Society, I took occasion to say while discussing the underlying principles of mastication that present knowledge of the precise movements of the inferior jaw was not sufficiently clear to warrant a positive declaration regarding this mechanical action, nor do we comprehend the manner in which the process of manducation is conducted; my remarks seemed to strike a responsive chord, and the result was a request to embody my deductions into a paper for the Illinois State Dental Society; and in this paper the movements of are delineated as based on the theorems of nature, as I have found them. Your committee has asked that I elucidate the points in this latter paper and add such items as have since accrued complementary to this theme.

"It would be of great interest to recite the progress that anatomists have made in their study of the mechanism of mastication, but suffice is the statement that for two hundred years the medical and dental practitioners have been struggling with the problem and are gradually conceiving the principles which govern this divine ordination.

"To one of our noble craft the world owes much of its information on this subject of articulation and occlusion, Dr. Bonwill, of Philadelphia. Though I do not now agree with him in the major portion of his deduction I nevertheless revere him for having been the cause of stimulating and directing my study.

"The study of mastication is one which is of greatest possible concern to both the operative and prosthetic dentist, since assurance of success is only possible when a complete mastery of the subject of mastication is reached, and this happy era has not arrived, though we are patiently laboring to attain complete knowledge of this, the most complex of all mechanism entering into the human anatomy.

"You will observe that I differentiate between the terms, 'Process of eating' and 'philosophy of mastication.' Now, I believe that all

animals having teeth eat, yet not all animals having teeth masticate. To me the word mastication means the process of cutting, grinding and crushing food, and this word, according to such inference, relates most happily to man, since his jaws admit of the functions of cutting, grinding and crushing. The word philosophy in connection with this paper pertains to the architecture, movements and force of the human jaw.

"If we hope to advance in our calling we cannot stand idly by and disregard nature. If we wish to make a success of this grand division of dentistry we must copy after the normal. There can be little doubt as regards the inefficiencies of the artificial dentures which admit of only the hinge of ginglymoid movement; disregard for the normal mastication has led the practitioners to grow indifferent to nature's requisitions and the result is that the public, which is compelled to empty these artifices, pays the penalty for violation of nature's laws.

"Many practitioners offer as an argument that the patients do not appreciate the worth of artificial dentures allowing of accurate jaw movements; beside the same dentists claim the time devoted to so laborious a task is not sufficiently compensatory. To the first objection we answer: If the dentist will instruct his patrons in the importance of lateral movements of the jaw and incidentally point out the value of teeth possessing the possibilities the patient will anxiously accept the decision of the dentist as deserving of recognition.

"There are people in every section of this great land who, if convinced of the utility of perfect artificial dentures, would eagerly pay any multiple of our national currency, though strictly speaking the subject of price has little bearing on scientific results. If we copy after the pattern furnished by nature we cannot go far astray and thus render the most humanitarian service. We must set up fewer clandestine models or patterns, for, after all, the most æsthetic and generally the most useful is indexed in the book of Providence.

"Those who are anticipating an instrument in the form of an articulator which will make occlusion and articulation in artificial substitutes positive and certain in every case are certainly harboring in their minds a delusion which can bring them no good. Our professional work is such that, no matter how carefully we mount our artificial dentures, we must always construct trial plates, make changes and even after the case is soldered or vulcanized we must carve and sculpture the occlusal surfaces until in the mouth we get perfect results. This art side of dentistry can never be eliminated. It stamps us as something more than mechanics, in that we cannot

always follow set rules or depend on the machine production. The articulator holds the same relation to dentistry that the pentograph does to the artist—serving simply to register basic lines—it then remains for the artist-dentist to incorporate detail, minutia and life.

"There is not so pronounced a lateral movement in the jaw in manducation as previous writers have depicted. During normal mastication the lateral motion of the jaw is slight, seldom exceeding one-third of the width of the occlusal surface of the first superior bicuspid.

"The reason why anatomists in the past have failed in their registry of the movements of the jaw can be traced directly to the dissecting rooms, where they have prosecuted their search for knowledge on the cold and lifeless body, instead of the living subject. Further, teachers of anatomy invariably instruct students from the skeleton, which has the lower jaw hinged at the glenoid cavity, whereas it should be pinioned at the line of occlusion, immediately below the glenoid cavity. This incorrect method of demonstrating the position and stationality of the jaw has prejudiced the minds of students and instituted a variety of misconceptions.

"The diagrams which I present I carefully prepared from nature and I invite all present to criticise the paper, as I am anxious to learn more about this fascinating subject."

From this point the lecture was entirely technical, referring extensively to the diagrams and explaining the illustrations thrown up on the screen by the stereopticon.

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## BACTERIOLOGY AND PATHOLOGY.

BY GEO. W. COOK, B. S., D. D. S., Chicago, Ill.

*(Continued from page 407, Vol. I.)*

In the discussion of the diphtheria germ as well as a number of others has made it somewhat difficult in what class in the science of morphology to place some of the fungi. As we have already said the bacilli of tuberculosis and diphtheria have created considerable interest because of their variation of form and their tendency to sometimes branch.

In the discussion of the bacillus coli communis we called attention to its variation and form, and notably a coccoid form, and a diplococcoid variety. Ohlamacher recently called attention to a branching form of this organism from a culture obtained from a case of septicæmia. Babes gave a description of budding tendency of the streptococcus pyogenes and the pneumococcus, but they did not take on the tendency of the true branching form.



The bacterium *aceti* and a bacteria from the root of *vicia villosa* were found by Fischer to undergo a true branching formation. This branching took place in the organisms just named when they were allowed to grow under unfavorable conditions, especially when ammonium chloride or glucose, or other substances were added to the media that would have a tendency to render the food media unfavorable for these particular micro-organisms to carry out in full their physiological activity.

Hugo, Marx, Levy and Simmer all found that the bacillus *oceanea*, which under ordinary circumstances is a very short rodform, but in old cultures there occur a true branching which was sufficient to cause them to class this organism with the streptothricea.

The bacillus of swine erysipelas was described by Kitt as producing branches in old bouillon cultures. Kitt also noted in his paper that Lorenz had obtained branching forms of this organism when allowed to grow in bouillon for considerable length of time. The branching of diphtheria bacillus and the bacillus of tuberculosis has been extensively studied in this country by Hill, who had found the diphtheria bacillus frequently to take on a branching form. He was also able to trace under the microscope the branching of this organism in 24 hours, which apparently does not corroborate the statements that similar conditions take place at such an early period with other bacteria. The tubercular bacilli and its morphological variation was extensively studied by Babes and Cornil and a number of other observers who have already been named in our previous remarks on this subject.

There is one important point to be borne in mind in connection with this very interesting biological phenomena of the morphological variation, and that is that the branching forms and the mycelium formations invariably occur in older cultures; a phenomena that has been alluded to by other writers, and universally observed in my own cultural work. Fischer has offered an explanation of how the branching of bacteria takes place. He considers it as being caused by the changes in the osmotic pressure of the media surrounding them, in which case as he observed the rupture of the membrane of the bacterial cell and the extrusion of a portion of the protoplasmia. After the restoration of the equilibrium of the osmosis surrounding the bacterial cell, growth again takes place.

There are unquestionably many factors that enter into this very complex problem, but the probabilities are that the variation of morphology is more or less influenced by the intercellular product of the bacterial cell, and also contains chemical substances formed in the media by the enzymatic action of bacteria. As to just how far this

branching or thread formation is carried on in those pathogenic or parasitic micro-organisms is a question. As yet but little light has been thrown upon that phase of the subject; so far as the tubercular bacilli and the bacilli of diphtheria.

Lubarsch called attention to certain form in the animal body, such as radiating foci with club-shaped prolongations. Craig called attention to both alcohol and acid proof. Branching bacilli occurred in the sputum of the pulmonary gangrene, but he gave no account of culture investigations or inoculations. He assumed that the tubercular bacilli owed its reactions to staining agents. Fraenkel and Robinwich also obtained the branching forms of an organism which on artificial cultivation and inoculation proved to be non-pathogenic.

One of the most typical pathogenic micro-organisms found in animal and man which partakes of the typical branching and club formation in the tissue, and fulfills all the characteristics of the true branching and club forms, both in cultural and animal inoculations, is the actinomyce or the ray-fungus. It produces a disease process common both in man and the domestic animal.

This organism was found in the ox by Bolinger. The parasite was first described by him in 1877. The name was applied by Hartz, a botanist. James Israel described this micro-organism in human subject in 1878. In the following year Ponfick identified this micro-organism as being the one described by both Bolinger and Israel. Since the first identification of this pathological process the characteristics of which occur very similar in both animal and man was at first thought to be extremely rare, but later research and observation have revealed the fact that its appearance in man is quite frequent. The pathological process in man is characterized by a chronic suppurative process, which may extend to the internal organs, and produce certain features of a form of pyemia. In swine the disease appears very much like that in the human being, while in the ox and horse the characteristic appearance is that of an abundance of granulative tissue with an extensive tumorous formation. (This illustrates very clearly the difference of the activity of micro-organism and the reactivity of the tissue to the different animals, to the same specie of micro-organism).

The naked eye appearance of the actinomyce as found in the tissue consists of little round masses which may be considered as colonies, and when they are fully developed, can be easily seen with the naked eye, for they are then the size of a small pin's head. Their color appearance is that of an opaque—varying from white, yellow, green, or sometimes may be almost black. Their color is more or less modified by certain degenerative changes and the presence of

certain kinds of pigmentation, which to a large extent is modified degenerative process and the age of the colonies. The younger colonies are usually observed to be somewhat transparent, while the older granules appear more opaque. When taken between the thumb and finger their resistance to crushing differs also to an extent, as to the age of the colonies and the kind of animals their development has taken place in; for in the human subject they seem to be very much softer, and their consistency seems to be very much like that of tal-low. On the other hand the granules that have developed in the ox seem to be more resistant; and when crushed between the fingers or a microscopic slide and cover glass they have a granular feeling, which is due to the calcific deposit that takes place during the formations of the granules, however, in one of the cases that I shall hereafter call your attention to I found many of these granules in the human subject, which seemed to have taken on that granular or calcific formation. According to the literature and all the information I have been able to obtain from the cases studied, both in the human and domestic animals, this hard, gritting appearance of these granules are not so hard in the human subject as those found in the domestic animal tissue. They are sometimes described as always of the distinctly yellow color, but this description does not hold good in all cases. In the human individual they occur most frequently as small specks, suspended in a semi-translucent substance, resembling very much that of serum, but is usually much thicker; and when placed between a cover glass and slide and held up to the light the entire mass has the appearance of a greenish-gray tint.

The exact botanical relation of the actinomyce or the ray-fungus is not very well settled. Some authorities have looked upon this micro-organism as belonging to the pleomorphic bacterium, and is looked upon as the streptothrix form. According to the microscopic appearance of this micro-organism as found in the tissues, and also under artificial cultivation it is found to have somewhat an extreme morphological variation, which consists of filaments, cocci and club-shape. This variation in morphology is the reason for its being looked upon as a pleomorphic bacterium of class of streptothrix. The filaments are sometimes of considerable length; the greater the length of the threads the more slender the appearance seems to be. In the older growths there can be seen in the protoplasmia of the inner portion of the micro-organism a dark granular pigment. These filaments may grow and interlace in such a way as to make a complete net-work. Under the microscope they appear as though they radiated from a common center, the periphery of which may appear as somewhat loosely woven together, while in the center there may

be a dark opaque appearance. Their branching appearance is one of the characteristics which distinguishes them from the lowest forms of bacterial life. As we have already stated there is no question but that this micro-organism is a specie of a pleomorphic bacterium known as streptothrix, which at once distinguishes it from the lowest form of vegetable life.

The characteristic staining of the filaments in the younger colonies is quite uniform, while the older colonies the filaments stain in a somewhat segmented manner, which gives it the appearance of the chain of bacilli. The intercellular protoplasmia of these filaments even break up into spherical forms, and stain in such a way as to give the appearance of a streptococcus form; and they sometimes break up in such a way as to allow these spherical bodies to be free from each other. Some investigators have looked upon these as spore-formation, but as yet there is not sufficient proof to fully establish the truth of this. It seems that we can only say that it is a stage of a physiological activity, brought about under certain conditions. If we could say that the micro-organism was a true streptothrix, we could say that these round bodies were conidia. These bacilli and coccus forms are readily stained by Gram's method.

When we consider another phase of the morphology it is well to bear in mind that the size and form vary considerably. The clubbed appearance of this micro-organism is extremely interesting, because of their sometimes appearing of great size, while at other times it shows the form of a hyaline swelling of the sheath around the free extremities of the bacilli forms of bacteria. These clubbed forms are elongated, pear-shaped bodies, radiating out from a common center and are formed upon the free ends of the filaments. These clubs seem to be of rather frail structure, where they are found in the human subject. They are easily broken up and may become plasmolized in water, while in the ox they are much more resistant, especially the older colonies. In the domestic animals like the ox the clubbed appearance is the most common, while the filaments or the mycelium threads in most instances have entirely disappeared, except in the growths where the inoculation has recently appeared.

As has already been stated the progress of the disease in cattle seem to run in much more chronic course than that in the human being. In the cases that it has been my privilege to study, in the human being I have found but very few of the typical clubbed-shape appearance, like those that are usually found in the slaughter houses where a great number of cattle are killed for this disease. In the human subject the branching filaments seem to be in greater

abundance, and in some instances they appear very much as a bacilli. I do not wish to be understood as saying that the club-shaped never appear in the human subject, for it is upon this point that a ready and positive diagnosis is made of this disease.

As we have previously stated, this disease process is a chronic inflammatory suppurative condition that slowly spreads through the tissue, producing a hard tumorous mass. The specific cause of the disease is the actinomyces. As yet no definite manner of this infection has been established, but most likely the micro-organism is conveyed to the part by means of vegetable substance, or through some form of grain like oats, barley or wheat. The weight of evidence seems to be in favor of grain; first, because its natural habitat seems to be in the sheaves and the straws of grain; secondly, many of the straws and splinters of straw have been found embedded in the lesions of the tissues. In cattle the lesions have been found in the lower jaw more frequent than in the upper. No organ or tissue of the body seems to be entirely exempt from it, for it has been found in the tongue, neck, lungs, intestines and other internal organs. In man the pathological lesion is met with more frequently in the gum and the floor of the mouth. In 1898 and '99 I gathered the statistics of all the cases reported in the human subject up to that time, which were presented by me in the Chicago Dental Society in a paper that I read before that Association, and published in the *Dental Review* April, 1901. The literature up to that time gave 587 cases, and the primary lesions were located as follows: Head, neck and tongue, 316; thoracic cavity, 131; abdominal cavity, 27; and cutaneous or skin lesion, 27. The ray fungus has been found in various organs of the body. There was found an actinomycotic process in the human ovary. The ray fungus has been found in the heart, brain, intestines, lungs, mouth, muscles and thyroid gland. The disease process may produce considerable disfigurement because of the large condition that is usually produced when the disease is in active process. The process of repair may proceed until the lesion seems to almost disappear; when on examination it will be found that a sinus has been established and a new foci of inflammation, with the gradual breaking down of the central portion of the mass, with a pus formation. This may go on for an indefinite period until a very large area may become involved. Sometimes the primary lesion may become entirely healed; occasionally a calcification of the diseased area may take place. In the primary lesions of the lungs there is a kind of a catarrhal inflammatory condition of the bronchi, the lung tissue becoming more or less indurated from an interstitial pneumonitis. From the bronchi it may spread to the

pluro and the pericardium. Owing to the fact, however, that this disease is more frequently found in the oral cavity and that infection of other parts, such as the neck, tonsils, and bronchi have taken place through the oral cavity and of the primary lesion which more frequently occurs around the roots of the teeth. This is naturally the part that interests us most as dentists.

In the paper referred to of mine above I reported three cases of this disease in which I made a careful bacteriological and pathological study of the disease condition. In the majority of cases reported in literature where this disease has occurred around the teeth, the writers have most generally stated that the teeth became loosened in the alveoli. In my observation on these three cases there was a form of ankylosis. In each instance the teeth had to be removed by surgically cutting them loose from the bony structure. The infection of each of these cases had taken place through badly decayed teeth. In the first case that came into my hands I did not suspect the disease was that of actinomycosis, consequently I did not study the case bacteriologically for some time after the removal of the tooth.

Since the reporting of these cases I have had the privilege of seeing another very interesting case in which the infection had evidently taken place either around the neck of the tooth or through the mucous membrane. It had a very large tumorous formation and had grown to such a size that it was almost impossible to see out of the eye on that side. The patient had been advised that the growth was of a cancerous nature and that it would be necessary to remove the superior maxillary, which he practically had made up his mind to have done. On leaving the West and coming to Chicago he visited a young medical man whom he had formerly known. The young doctor advised him of the gravity of the operation and by mere accident brought the patient over to my office that I might look over his teeth. On examining his mouth I found the teeth in fairly good condition, except that there was a fistula in the buccal mucous membrane just above the sinus which ran back over the root of the first and second molar and there had been considerable area of tissue destruction and calcification. I found that there was a small pocket in which there was some pus. I made somewhat of an exploratory examination of the pocket and sinuses and after a while discovered the characteristic granules in this purulent exudate, which I was able to squeeze out of the fistula's opening. On microscopic examination the mycelium branching forms were easily detected, but not until after a long and tedious investigation and curetting the pockets were the club forms eventually found.

There is beyond question a number of such cases that go for

years without their true pathological nature being known, and possibly many of such cases may spontaneously recover.

While it is not my province or purpose to discuss the therapeutic treatment, yet I might mention here that iodide of potassium has been observed to be almost a specific for this disease. In the case of cattle it was found to take such an immense quantity and a great deal of trouble to treat animals with such agents, and because the great expense of potassium iodide it has not been followed out very closely in the treatment of diseases in cattle. In man the treatment of iodide and potassium has gained considerable favor. Sawyer, of Iowa, reported before the Iowa Medical Society seven cases in which he had found the ray fungus in each case, and on treatment with this agent a complete recovery of the seven cases took place. This is certainly very strong evidence that the iodide of potassium is a beneficial agent in the treatment of this disease.

We have previously stated that the parasite exists outside of the body on grain, such as barley; not that it has been cultivated or observed outside of the animal tissue, for no one so far as I know has been able to demonstrate this micro-organism outside of the specific pathological lesions as found in man and the lower animals; but owing to the location of the lesions as found in cattle and the human individual and the finding of pieces of husks of grain and straw has lead to the supposition that it exists as a parasite upon this form of vegetation.

The cultivation of this micro-organism can be accomplished upon the ordinary culture media, such as gelatine, and at the ordinary room temperature; but here its growth is rather slow because the optimum temperature seems to be 37 C. The growth on gelatine slowly liquefies the media. On agar or glycerine agar a growth can be seen with the naked eye in from three to four days, with a somewhat transparent appearance. However, according to investigations there seems to be quite a variety of this specie belonging to the class of fungi, some of which have the appearance of pigmentation in the culture media; some having a brown or yellowish tint, while others may show a red or pinkish appearance.

It would be quite impossible to go into a full description of these various varieties. To those who are interested in this phase of the subject I could do no better than to refer to the later investigations of Eppinger, Rossi-Doira and Gasperini. The last named investigator has contributed very ably to the actinomyces chromogenes.

Rullman has investigated the chemical activities of the fungus on artificial culture media. He found that it was easy to detect, an

earthy-like smell when grown on media consisting of carbohydrates. During this growth there is a nitrogenous body formed which can be dissolved in water and ether. The odor as it appears from this nitrogenous body is very much like that that arises from unclean flour or musty wheat. It has also been stated by the last named investigator that ammonia is formed in considerable quantities and when the ray fungus is cultivated with fission-fungus there is considerable nitrate formed, while if either of the organisms are grown separately the formation of nitrates does not take place in either case. This symbiotic phenomena may be observed in a great number of other micro-organisms.

Experimental observations regarding pathogenic actions by inoculations Bostrum states that he was unable to produce the disease in animals after artificially cultivating the micro-organism, while on the other hand Wolf and Israel state that they were able sometimes to demonstrate the multiplication of the parasite after the rod-forms had been inoculated into the peritoneal cavity of animals. Such inoculations was followed after a month by the formation of a nodular growth at the point of inoculation where it was found that some of the club forms were present. In many of these points as regards the physiological and pathological activity of this micro-organism there is much to be learned regarding its biological relation to disease and other chemical activities, both in and out of the body.

Right in this connection I will mention another disease while it bears no special relation to this phase of the subject other than the likeness of the micro-organism producing the chronic infectious disease. I here have reference to what is known as madura disease or mycetoma, a disease that is comparatively common in tropical climates and especially in India. The disease usually affects the feet and hands of the natives, but more especially the feet; thus we call it madura foot. This pathological lesion as it appears in the feet is very much the same as that described for actinomycosis. In the early stages of this disease there is a slow granular growth of the tissues with the formation of nodules, and as the disease progresses the foot becomes considerably enlarged, producing more or less distortion. The parasite of madura foot is very much the same as that producing actinomycosis. The disease has been found in India, Africa and Italy. I myself have had the privilege of seeing a case in a Spaniard. I think, however, that the disease might not be entirely exempt from most any country. Owing to the fact that the feet are more protected in the Northern countries, they are less liable to infection: also the natural habitat of this form of fungi is most likely to be in warm climates. Just what the natural hab-



it that of many of these species of fungi and their relations are to disease is a question that has hardly been touched upon. We find a great variety of one species or else a great number of species of the fungi that produce disease under a great variety of circumstances. We take, for instance, a great number of pathological lesions of the skin and we find there a great variety of micro-organisms producing all sorts of different disease processes—for instance, the favus, herpes tonsurans. This disease is produced by a narrow thread but little branching and a few conidia forms. This micro-organism follows the shaft of the hair and penetrates sometimes quite deeply into the sub-epithelial structure. Its action is in a special place and that is along the shaft and bulb of the hair, which evidently destroys the metabolical activity of the tissue cells around the hair bulb and causes the loss of the hair. We have another example such as pityriasis versicolor. This micro-organism is very much the same as the one just mentioned with the exception of size, which is very much smaller than the one above described. The activity of this micro-organism, in such structure as the epithelial, produces discoloration of the skin, which is a pale yellow, or sometimes a brownish-red color. The appearance of the skin is that of a smooth glistening, a dull brown or a form of desquamation of the epithelial substance.

We might mention here another fungus which is usually called the Achorion Schonleini, which was discovered in 1839. This micro-organism has its habitat in the hairy portion of the scalp. It seldom appears on any other part of the body. It may be found, however, around the roots of nails, where it appears as a very small sulphur colored disk in the nails.

We could go on and name a great list of such fungi that appear on the human skin in the form of some chronic disease process that may never inconvenience the individual in any way.

There is a variety of fungi that attacks the feathers of various fowls. It causes the loss of feathers very much in the same way as that of the hair of the human scalp.

There is a form of fungus that attacks the nails, horns and hoofs of cattle. Marshall Ward has carried on a series of investigations establishing the true identity of the micro-organism that attacks the horns of cattle, producing an extremely chronic pathological process which usually terminates in the loss of the horns by destroying all the functional activity around the roots.

No doubt most every one is more or less familiar with that well known disease among cattle called hollow-horn. This disease was formerly treated by boring a hole in the horn and then pouring turpentine into it. While this treatment was very empirical

still it was practical. The same pathological condition occurs in this disease as that of the tooth of the human individual, where by a process of infection the pulp is destroyed and undergoes a degenerative process, with the formation of gas. This is exactly what takes place in the horns of cattle; and the relief is in giving vent to the gaseous substance. The hoofs of cattle and horses frequently become diseased by a typical infectious process, and that well known disease of the hoofs of sheep, a disease formerly spoken of as foot and mouth disease of sheep and cattle.

I have here mentioned these diseases to illustrate the biological phenomena of the activity of many forms of these parasitic fungi. These diseased conditions occur in a peculiar tissue substance. As is well known all such epithelial structure of the hoofs, horns and nails, hair of the human individual and the feathers of birds contain an organic base which resembles in some respect an albuminous substance. This is a form of proteids known as keratine. Marshall Ward demonstrated the fact that the fungus that produces the disease of horns could not be cultivated artificially without first sterilizing the horn and then scraping a portion of that in this culture media; thus adding the substance which they must have in order that they might carry on their physiological function of growth and reproduction. This is most likely true in all of the fungi that acts upon certain tissue element.

We have a disease of the skin caused by the budding fungi which is now recognized as blastomycosis, a disease that was first described by Gilchrist and Busse. In the cultivation of this disease the growth of the fungus varies considerably; sometimes it grows as a budding fungus, and other times it grows in long mycelium threads. This micro-organism has proved to be beyond question the exciting cause of a disease of the skin. It has been observed in cases of tuberculosis of the skin that it takes on a local pathological process and operates only in certain tissues, producing the characteristic symptoms of the disease in that particular tissue.

If time and space would permit we could enumerate a great many fungi which have a physiological activity and bring about only a pathological process in certain specialized tissue cells. In other words they have a positive chemotactic property for certain substance that they can get in certain tissue only. I believe that we have to admit one fact and that is that the tissue in order to be acted upon in a deleterious manner must have a predisposition to certain infectious diseases. If we accept the parasitic nature of disease, which at the present time we must, there are a great number of factors to be taken into consideration.

At the present time all the diseases of which we have any knowledge of the etiology, the exciting factor is an external one. There is a number of diseases the causes of which we know practically nothing. In their true cause lies the inefficiency of our apparatus and ability to determine the exciting cause. For it is a well known fact that a great number of bacteria that live almost as a saprophyte will, under certain conditions and with a large number of animals, including man, cause a well known and distinctive specific disease. For illustration, Hoffmann, Von Wellenhof and Gruber described a micro-organism that had many of the characteristics of the ray-fungus, especially in inoculations in animals. Löffler and Schutz gave a description of this micro-organism in 1882. Under favorable conditions this bacterium-like micro-organism grows in minute rod-forms; they are joined to one another with a short thread. And Semmer claims to have found the branching forms under certain circumstances. This bacteria grows best at about a temperature of 22. It grows on the ordinary agar-agar and blood serum, and also potato. In this last named media it develops a yellow coating over the surface of the potato, later becoming brown. The pathogenic properties are soon lost in the older cultures. The fresh cultures are very virulent and the disease is extremely contagious. It has been recorded that two bacteriologists have lost their lives in working with this germ. Horses, however, seem to be more susceptible. It is commonly known in horses as glanders. This micro-organism has not been found in healthy bodies; neither has it been found so far as we know, except in diseased animals. Its chemical activities seem to be the formation of a brown pigment on the surface of potatoes. It forms a bacterio protein known as mallein. In bouillon cultures traces of indol are found. Guinea-pigs and field-mice are very susceptible to the actions of this germ. Rabbits are slightly susceptible; while the gray or house-mice are never affected by the germ, so far as present observation goes. This micro-organism is extremely susceptible to the action of antiseptic solutions and heat. Löffler found that if kept at a temperature of 55 C. they were usually killed in ten minutes; and so far as we know no micro-organism is killed so quickly by the action of a 5 per cent carbolic acid solution. The bacillus of glanders is referred to because of its near approach in morphology to that of the tubercular bacilli. Its staining reaction differs considerably from that of the tubercular bacilli. Its action in the tissue is very much more rapid than the tubercular bacilli, but it follows very closely the tissue structure, and frequently there is found a nodular appearance in the lymphoid structure.

In the discussion of these micro-organisms up to the present time we are very liable to come to the conclusion that it is the low forms of vegetable life, and to them alone is due all the so-called parasitic forms of disease. It is important to bear in mind that bacteria is not the only organism that is capable of producing disease in man and animals; for it has been demonstrated that an amoeba has been found in the human intestine that causes dysentery and also liver abscesses. These micro-organisms evidently belong to the animal kingdom and are known as the protozoa.

At the present time we are not in position to give a true and definite line of demarcation between the animal and vegetable parasite.

There is a disease known in India among horses, camels and asses caused by flagellated monads. This disease is known as surra. It appears in the form of septicæmia and is extremely fatal to the animals just named.

In 1882 Lavaren found a microbe in patients suffering with malaria that is universally looked upon as belonging to the protozoa. This organism has not been cultivated.

(To be continued.)

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## THE GOLD FEVER.

BY DR. GEO. A. MILLS.

"In the days of '49" this country was known the world over as having the gold fever. In the closing days of the past century and the beginning of this, it seems as if the dentists of the United States have been exposed to the same disease and very few found immune.

In looking over a prominent dental journal I notice a popular dentist says, "Put gold in children's teeth." Very well, I most heartily agree with him in some cases. It is very well for a man, who has the class of practice in a city where the patient's teeth are examined at least once a year, and in many cases once a month, to make such statements and to hold up *his* class of practice as what every man should do.

Now, it is a fact which I believe no one will dispute, that the large number in practice do not hold the enviable position of practicing among a refined class in a city. Most of them are in smaller towns where the average patient, and especially children, are not placed under dental care until the whole occlusal surface and either the distal or mesial surfaces combined are completely decayed and an exposed pulp in undue prominence. Patient remarks, "Hain't

slept any for three nights now, and ain't et nothin since day before yesterday. I have tried some liniments but it did not do nothin' but burn my mouth." You draw a deep inward sigh and, as you get your mirror, the patient remarks something about not having washed the teeth for a couple of days, as it hurt the tooth. You meet a breath of camphor, arnica, Pond's Extract and Pain Killer, a molar, we will say, with a thin buccal wall and very good distal and no mesial. Of course you at once devitalize and then comes the question of what to do to save the tooth. Of course the patient at once knows gold is not needed, as it don't show any way. Even if gold was wanted it is a question if the standing walls would hold it. If they would the filling would not last over five or six years, no matter who the man is who put it in.

Then you have to crown or extract, as the patient has lost all confidence in you, besides being out of humor at the price of gold in the start, you usually extract.

Now, my friend, who vaunts his theories very much as the self-made man does his method of rising in the world, steps to the front and tells me to teach my patient that a gold filling, costing from five to ten dollars lasting for a given length of time, is just the thing. Better to pay that and do the crowning later. Very pretty and I admire the sentiment and also the graceful way in which he uses the first person, singular, as he seizes the opportunity to tell a few more of his exploits. But if some one would tell us how to make a living in the meanwhile, he will have filled a long felt want. The thing of being a missionary and training the people is very well, but we have no one to kidnap us and hold us for a ransom. So, we can come out on the lecture platform and make our fortune.

When one man, and a stranger at that, steps into a community and tries to make people think as he does, he will be kept busy at no income. A couple of years ago I stepped into an office of a young graduate. In a condescending manner he explained the gold theory and that he aspired, above all things, to be a great man on gold fillings. He had been crammed at college and went out with the expectation of meeting a practice in a small town equal to the finest that any of his instructors held. I met one of his gold fillings in a year after he put it in, occlusal and mesial surfaces involved, extending under gum. With the point of an explorer I went under the gum and picked the filling out. I have had the same experience since with a number of his fillings, and not only his but a number of others.

The young men are being spoiled. They hear gold talked and

advocated by men of vast experience until they think that nothing is left but gold. So they start in to use gold in every cavity, regardless of everything.

Now, do not think that I am not in favor of gold. I am, provided it is in its proper place. It is acknowledged that cements and amalgams, properly inserted, not only make a lasting filling, but by chemical action on the tooth harden it. I believe that by adjusting the rubber dam and manipulating the filling material properly, be it cement or amalgam, that if the cavity is properly prepared and the developmental grooves followed out that we could put in a filling that will benefit our patient and also ourselves, and not place our profession as a haphazard way of getting the most money for the least benefit, in the eyes of the people.

How many of us, in looking into the mouth of an old timer, will discover a large black filling taking in most of the tooth; on inquiry we find it to have been placed there years ago, about the time that amalgam was obtained by filing Spanish dollars. Can any of our gold men show a better record?

Let the young man learn to look at the tooth with an eye as to what is indicated and then act accordingly. With well cleaned and extended cavities, he will find that he will have use for his gold instruments on account of the good use to which he placed his ball burnishers.

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#### PRESIDENT'S ADDRESS.

*Read before Wisconsin State Dental Society, July 15-17.*

It is thirty-two years since the dentists of Wisconsin met in their first convention for the purpose of discussing all subjects pertaining to the welfare of the profession. Since that time it has frequently seemed that the state organization would lapse into that state designated by public statesmen as innocuous desuetude.

Particularly in the earlier periods of its existence did it have to struggle for life. However, the usefulness of the organization has become so patent to every thinking member of the profession, and its accomplishments have been so many, that no sane man would now question its utility or argue for its discontinuance.

I do not desire to take up your time with an elaborate discussion of what the society has accomplished during the period of its existence, nor even during the past year, since these matters are so fresh in the minds of everyone and require no elaboration. If the society had no other claim to recognition than its successful efforts

in raising the standard of dentistry in the state, that alone would be sufficient, and I believe our efforts in this regard should not be relaxed, but rather strengthened.

Every profession has its blacklegs. The reputable lawyers have to deal with the shyster; doctors of medicine have their quacks, and we have ours. They are rather of the profession than in it. The world is full of humbugs, and will continue to be, and it would be wonderful, indeed, if some of these would not attempt to crowd themselves into the dental profession. These free-booters must be kept out, in so far as this is possible. Our State Board of Examiners have done and are doing their utmost to accomplish this result, and their efforts ought to have the hearty co-operation of this body. By raising the standard of admission, the standard of the profession is raised, and the ethics of the craft is also raised.

Many dentists seem to fear the competition of the advertising quack, and are inclined thereby to become lax themselves. To my mind, no honest and able dentist has anything to fear from the quack. I believe it to be absolutely true that the public generally will discover a quack as quickly as any one. True, each community has a certain number of people who can always be imposed upon, but in the main this class of patients are better not reckoned among the clientele of a reputable dentist. No one ever heard of a shyster obtaining a large or profitable clientage in the legal profession, nor does the quack doctor ordinarily secure the respect of the public by his methods; and so with us, we can afford to maintain our own dignity by taking the lucrative practice in our respective communities, while the quack imposes upon the ignorant and unwary.

Last year we had no regular meeting of the society, but it was absorbed by the larger meeting of the National Association. It was a grand opportunity for the dentists of the state to meet and associate with the best elements in the profession in the country, and, needless to say, we all absorbed ideas that have been of value to us, and were all stimulated to higher and better efforts.

It is my sincere wish and hope that similar results may follow the meeting this year in this beautiful city. We all have in us the germs which, if properly developed, will make us great in our profession, and these state meetings ought to bring out the best talent in the state.

I do not desire to bore you with a long address, as oratory does not come within the purview of my professional duties, and thanking you sincerely for the honor of having been enabled to address you, and hoping you will have a profitable as well as pleasurable time, I now declare the convention open for business.

## DISCUSSION ON PRESIDENTS' ADDRESS.

BEFORE WISCONSIN STATE DENTAL SOCIETY, JULY 15--17.

DR. C. C. CHITTENDEN, Madison: Mr. President: I wish simply to congratulate the President on the tone and character of the paper he has presented to us and to say just one word, particularly in connection with his remarks on the subject of the fear generally felt by the dental practitioners of the danger they are in from the incursions of the quack and advertisers. It is the biggest bugbear and bugaboo that we have at all to think about or to contend with. If men would only just be very sure to know that if people want cheap things they will go where they are, and if they don't, they won't, the bugbear would fade away. I am not prepared to discuss this paper, but I simply wanted to say something to get somebody else on the floor.

DR. E. C. FRENCH, Eau Claire: It is not my purpose to have much of anything to say during this session of the State Association, but there is always something comes up by way of personal experience during the year that happily fits into some one's paper or some discussion. Now, speaking of this bugaboo of the advertisers', I think any man that has been in practice in any city of any considerable size has more or less of that to deal with. I remember a few years ago of a man that is now advertising very extensively in the city of Milwaukee, coming to the city in which I practice, and his methods of advertising were peculiar, as the man himself is peculiar. At the end of one year and a half this man was on the road with a medicine concern, extracting teeth on the street free of charge, without pain. He came to my office before he went away and he said, "Doctor, I am \$1,500 worse off than I was when I came to Eau Claire."

DR. A. HOLBROOK, Milwaukee: It has been a long time since I have been permitted to stand up before the Wisconsin State Dental Society. In looking over the record I find that it is just thirty years ago that I occupied the same chair that the President occupies today. As you have suggested, time is moving, and I recollect the old days when we had so much work to keep this society upon its feet. Dr. Chilson knows, and Dr. Chittenden knows, all know about it. I congratulate you, sir, that you are permitted at this time and at this stage in dentistry to preside over such a grand society as we now have about us. Your address, sir, is commendable, in that it speaks for dentistry and dentists. Each man must speak for himself. I may be on the "outer line," but still I am in the work



and propose to stay there for some little time yet. I don't know what else I can add to your address. It has pleased me very much, and I thank you for it. The matter of advertising, it seems to me, will take care of itself. There is honest advertising and dishonest advertising. The Committee on Ethics this afternoon have brought in a report upon which this body has acted. I do not consider the action of the young man in question one iota dishonorable. As he said, he did it upon his own sense of duty for himself and his clientele. It probably was a breach of discipline, as we call it in the army. But, there is dishonest advertising, that this society should sit down upon with all its strength; and if this little item that came up this afternoon is an indication of what you can do, when dishonest advertising comes upon the stage, this society is able to take care of itself, and each member is able to take care of himself. Mr. President, I am thankful that I am able to be here this afternoon and celebrate this thirtieth anniversary.

DR. W. H. CHILSON, Appleton: As one of the early members of this society, having attended many meetings, of course, I have kept in touch with all the changes during the past thirty odd years. While the President's address was brief, perhaps too brief because it was full of good thought and good suggestion which might have been continued along those lines profitably for twenty minutes or half an hour,—yet I am glad for the suggestions which he has made. I am glad for the suggestion of retrospect and reminiscence; and it pleased me today to know that there are still on this floor three or four of the original members. At the time of the formation of this society, there were probably seventy-five dentists in Wisconsin. There was at that time a great deal of dentistry done that might indeed be called quack dentistry. The people had not been educated up to the standard that is now demanded. Notwithstanding, this society has had a great struggle, it has educated the public, it has stimulated thought, and from that thought has come ideas, study, and advancement; and we look about us today upon a large society of intelligent, honorable men; men who are living up to the code of ethics. It goes without saying that every professional dentist subscribed to the code of ethics in his own mind; but I find while I speak of the code of ethics that very few of us have read literally the code of ethics. We never have had examples by which to apply it; or at least, we never had trials enough to bring out the different points in the code of ethics. My friend, Dr. Holbrook, has mentioned today the report of the Ethics Committee. I want to say that we found in this trial no intention to do wrong, and therefore we must always take cognizance of the internal force and direct it

in that particular way. The subject is one that is almost too deep for casual discussion, unless you give specific attention to the particular points made in the paper, so that you are able to refer to authorities as far as possible to corroborate your own observations.

Thirty years ago I stood upon this floor with Dr. Chittenden and Dr. Holbrook. We were then young men, just from the great Civil War, where we had served three or four years. We were vigorous, strong and determined, and didn't know what failure meant; while I do not wish to take credit unto myself, I want to say that such men as I have mentioned, did much to give this society strength, and give it a standing; to keep it together, and keep it advancing along the line of progress; and it is a strange thing to me that today the three members who are put upon the honorary list, by reason of serving twenty-five years or more in this society, are the three soldier boys that entered it from beginning; and God helping me, I propose to stay with this society as long as I practice dentistry. (Applause.)

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## ORAL HYGIENE IN OUR PUBLIC SCHOOLS.

BY F. W. STEPHAN, D. D. S.

READ BEFORE WISCONSIN STATE DENTAL SOCIETY, JULY 15--17

The health and happiness of the children should be an interesting subject for a sincere man's most earnest thoughts. We have all been surprised at what we deem gross ignorance of dental prophylaxis revealed in those otherwise so highly informed and cultured, but have overlooked the fact that a perfectly normal and healthy mouth naturally requires no more attention or care than any of the rest of the mucous-membrane-covered organs. Another fact, however, is that a perfectly normal healthy mouth is one of the most rare of all beauties we behold, but, on the contrary, the mouth is usually the hotbed of bacterial pollution.

Parental ignorance as to so simple a need as that of oral cleanliness is one of the most startling things the dentist has to contend with. See the many thousand children that are reared today; notice the condition of their teeth and the wrecks of humanity they are, while the parents are oblivious of the consequence of their neglect, paying too little heed to the physical welfare of their own offspring, conditioned largely by the septic character of the bacterial growths, their ferments and toxins that infest the mouth and find their way into the system.

Medical and scientific authorities recognize that most of our

diseases, aches and pains are the result of bacteria that have gained entrance to the human system through this channel, and that the germs of our most dreaded diseases are generally discovered first in the mouth, as instanced by Williams, Miller and others.

Bacteria, however, remain inert in the mouth so long as a state of asepsis is maintained, but when through simple neglect it becomes favorable to the propagation of germs, they multiply with fearful rapidity; the tongue and tonsils become coated with foul bacterial growth; the breath becomes disgusting, and tonsillitis, indigestion, neuralgia, possibly diphtheria or other contagious diseases and serious systemic disturbance, follow as the system becomes unable to throw off the toxins excreted. Thus disease and death are frequently the result of the degenerative process begun in the mouth. Now, with the condition of the general ignorance existing, shall we continue to sit in judgment upon the unenlightened?

The special field of our study and labor bring us into important counsel concerning oral hygienics. But the sphere of usefulness is limited indeed, if you narrow yourself down to professional advice and instruction that shall be given only to the limited number coming into your office for consultation.

As we cannot reach the home circles effectively through contact without allotted clientele for proper education in this direction, and cannot educate the parents to educate the child, why not properly instruct the child in the schools?

With the widening sphere of the dentist's usefulness, the demand for his knowledge of how to prevent certain difficulties and lessen possible recurrences of oral imperfections, etc., has become the order of things. Right here is where the dentist should grow and become liberal in the generous giving from his acquired store of useful information.

How effectually would a thoroughly aseptic condition of the mouth aid in guarding the children? And what is our duty when we know that bacteria remain inert under these conditions? Reach the child in the years when the knowledge you impart shall become a part of his or her applied wisdom through future years.

You may say the school curriculum is already overfull; the teachers' time is now so overcrowded that they cannot begin to give even the theory of the studies they are expected to teach, and there is no time or place for the introduction of this kind of reform in the educational methods. There is where I disagree with you. The schools are open, and school board and teachers and the organized mothers' clubs and the children are approachable and anxious to gain just such practical information and put it into effect;

but you must do the work of educating. How? by occasional practical talks or lectures before the scholars and the organized mothers' clubs. There are enough dentists in any community who are qualified to lecture and write interestingly and instructively upon oral hygienics and so thoroughly to educate the coming generation, that neglect of proper care and precaution of the mouth such as would be beneficial to health and a safeguard to others, would be the exception, not the common order of things.

I believe the members of this Society should be the men to meet this particular need of the hour, and that the more general the participation in the effort, the more practical and complete will be the character of the knowledge thereby imparted, and I would suggest that we, in the name of humanity and for the honor of the profession, use our influence to help educate the masses in this science of which they are so ignorant. Let your voice and pen convey your thought so that the world shall have become the better for your having been in it.

You may think this has no other side than that of the fascination of talking to and entertaining an audience, but it is by far farther reaching. It tends to purify the very atmosphere that is laden with toxic odor. It prepares the way to an increasing practice for every practitioner, with its financial gain (and that interests you all), and it will tend to elevate the professional status in any community. It teaches the growing mind that ounce of prevention that is worth a ton of cure; it paves the future with promise for the young man just entering the arena with professional hopes and ambitions.

The results of rational dental treatments are manifested in the prophylactic effects which they produce on the health of the entire organism, but this effect can only be reached if the public is instructed on the value of these measures. Every one should know that to have healthy teeth is the first condition essential to keeping the stomach in a healthy state, and in order to derive the greatest benefit from our food, and to preserve or improve our health.

Hygiene, which teaches us the manner of preserving the health, rests to-day on a solid basis, and occupies a sure position in scientific and in public life. Its great value for the social development of the people is known by every one. It not only does prevent disease through personal sanitary care, but it also tries to improve the health of all the organs of the body. For many years sanitary measures have been growing, and it can be said that the interest in hygiene has increased. We see this in the provisions for water supply, even in the smallest towns; in the systems of sewers; in the

construction of public baths; in the police regulations regarding buildings; in the construction of modern houses; in the perfect heating and lighting plants and in the well-organized private hospitals, isolating the patients attacked with contagious diseases in special buildings.

The authorities also try to help public hygiene—they have practically made vaccination a compulsory measure; they have appointed health boards, etc.

In order to increase the general health of the people, the earnest participation of every one is indispensable. The particular hygiene of every man has to be developed. The instruction in hygiene has to become popularized so that practice shall become united to theory and theory to practice.

The lack of fundamental notions of natural and medical sciences is very great, not only among the lower but also among the upper classes. The children inherit this ignorance from their parents just as they do any particular disease. It is there that our instruction should begin in order to make them know that, besides a healthy home and good food, the body requires some rational care and attention. Cunningham, who inspected the English and Scotch schools, found that 10,517 children of about twelve years had a total of 35,279 diseased teeth, and only 1508 children (14.2 per cent) had healthy teeth.

In Strassburg, out of 3,000 children of the primary schools, only 165 had all their teeth in good condition, while the rest had a total of 12,917 diseased teeth.

The proportion is the same nearly everywhere. It is evident, and we can never repeat it too often, that this enormous propagation of caries of the teeth in all classes of the people ruins the health of the individual, and constitutes a great danger for the general health. This danger is caused partly by the teeth themselves, but principally by the great deal of harm that the body suffers as a consequence of the destruction of teeth. A continuous toothache is capable of causing loss of appetite and sleep, and of rendering us incapable of performing our daily duties. The *debris* which accumulates in cavities of decay produces a very disagreeable odor when it undergoes decomposition; the presence of cavities and of roots are the cause of fetor of the breath.

It must be remembered that the mouth is the entrance for morbid substances, and for micro-organisms of all kinds that enter the mouth from the surrounding atmosphere, where they are found in great quantities. They accumulate upon diseased teeth and in cavities while waiting for an opportunity to penetrate into the interior

of the body. It is for this reason that pathogenic microbes of all species are found in healthy individuals, and also in clean mouths they develop very well at the temperature of the mouth, and are only waiting for favorable conditions to become active. They find there the most suitable conditions for their development. The saliva, particles of tissues, and food debris in decomposition serve them as food. Under normal conditions the organs of the body, especially the gums, possess enough resistance to prevent the micro-organisms from entering. The nose and throat act normally as nearly perfect filters for the retention of bacteria, but very often these develop in the mouth. The exudations of gums inflamed through the presence of tartar and principally through decayed teeth with cavities filled with food debris, also ulcerated gums are perfect incubators for bacteria. Although it is a very well known fact that these organisms are the cause of disease, great negligence is shown in this connection. From the mouth these micro-organisms can penetrate the interior of the cranium into the salivary glands, lungs, and even into the general circulation. Even in the mouth these accumulations of bacteria cause very often inflammations, which can become very serious. Miller says that as much attention should be paid to the mouth in cases of digestive troubles as to the diseased stomach. Want of appetite, bad taste in the mouth and especially fetor of breath, that are supposed to originate in the stomach, are often only caused by a neglected and unclean condition of the mouth. These statements prove to us that the masses of bacteria found in unclean mouths independently of those introduced with the food and beverages are sufficient to provoke fermentations and chronic dyspepsia of the stomach.

Bacteria of diphtheria have been discovered in the mouth of a healthy child. The bacteria are only waiting for certain favorable conditions in order to produce their specific effect. Even the agent of pneumonia is found very often in the saliva of healthy people. The infections caused by bacteria from the atmosphere or from contact with infected objects are favored by the unhygienic conditions of the mouth. In consequence one of the most important preservative measures during an epidemic consists in giving to the mouth the kind of care required by the particular case.

What I have said about the micro-organisms of the mouth, about the dangers of infection for the entire organism, and about the care of adults' mouths has a greater bearing in children. The child's organism, being very delicate, and consequently very sensitive to the least amount of irritation, is exposed to indigestion, the consequences of which are so serious that they may become injurious to the devel-

opment and prosperity of the child. The sad consequences which result from the negligence of the deciduous teeth are disorders of the stomach, irregularities of the teeth, abnormal development of the maxillae, which results in deformities of the face. Also cavities of decay furnish, as we have already said, incubators for microbes, which are the cause of numerous diseases. We should also take into account the suffering of the child from toothache.

Many authorities agree that disorders of digestion with all their consequences are the greatest and most frequent disorders caused by caries of the teeth, for decayed teeth cannot properly masticate food; and hence the admixture with the saliva does not take place in the right way. It takes more time for the gastric juice to impregnate and digest the ingested food. The food stays in the stomach for a longer time than normally, and very soon abnormal fermentations cause digestive disorders to take place. Besides, the pieces of insufficiently masticated food irritate the mucous membrane of the stomach, producing a chronic inflammation. Many of those chronic catarrhs of the stomach are the consequence of insufficiently masticated food, and besides the mechanical irritation caused by insufficiently masticated food, there is also irritation caused by the ingestion of decomposed matter from carious cavities and decayed roots, and particularly ulcerated surfaces and discharging abscesses which conditions often continue for years; where is there a physician that would allow his patient, say in a case of an ulcerating arm, to touch the same with his mouth, and still this very condition is daily ignored by physicians and dentists, when present in the oral cavity. The longer this unhealthy state lasts, the more does the stomach suffer. In consequence, general nutrition will suffer the consequences of these disorders, and such disturbances as anemia, general weakness, diminished resistance to disease and premature death may follow.

Oral hygiene in the schools refers to pupils from the age of eight to that of eighteen. It is the time of greatest general development; of the development of the nervous system; of the evolution of the genital organs. It is a period of special nutrition, and it is necessary that this nutrition should not be deteriorated, so as not to provoke by its derangement the development of acquired or hereditary predispositions (tuberculosis, scrofula, rhachitis). During this period the mouth should be properly cared for, either for the immediate treatment of caries, for the prevention of threatened irregularities, or for the establishing of a general treatment.

Up to the age of twelve or thirteen years, at least in well-ordered

schools, overwork does not seem to be an aggravating cause of dental caries. The cavities present at this age are rather caused by faulty nutrition or else are the result of hereditary tendency, as, in fact, dental caries can be considered as an hereditary disease in the same way as tuberculosis and scrofula, with the difference that in those diseases the histological formation does not reveal anything abnormal, while in dental heredity the tooth is from the beginning, histologically speaking, of inferior variety.

These are the principal causes of caries until the age of thirteen or fourteen, after which time college and school work is also accountable. There are many young pupils whose faces show the signs of fatigue and emaciation; the nutrition in such cases is insufficient, due to the overcrowded character of the programs of the schools. If their mouths are examined, very often it will be found that their teeth are attacked by progressive soft caries. This proves that the organism is lacking in phosphates. These caries are the cause of faulty mastication; insalivation is incomplete, and dyspepsia, with its sequelae of physiological miseries, sets in.

During recent years the curriculum of the public schools has been largely increased. The children receive instruction in all the branches of education; they are taught the most recent progress of natural sciences; also some of the principles of chemistry and physics.

This program, which renders the pupils mentally able to undertake the studies leading to the professions open to the ambition of the children of the middle classes, and which gives them the knowledge that will enable them to take an interest in questions of a scientific and literary character, leaves untouched all that instruction which would be calculated to develop the body and to defend it against disease.

Excepting the gymnastic course, which relieves a little the monotony of the school room and which helps a little toward the physical development of the pupils, the latter receive only very vague hints on hygiene, and in this respect there is yet a great deal to be done in order to reach a practical result; besides the wise regulation in regard to vaccination, how many other things are left untouched? Do the regulations take any precautions in regard to vicious positions of the child's spinal column—often the cause of malformed shoulders and of compressed thorax? Do they insure that the children should have plenty of light in order to prevent in this way their eyes becoming myopic? Do they give them the fundamental principles of a good general hygiene? Do they point out the importance of caring for the teeth—the utility of bestowing upon



those valuable organs the necessary attention required for the right performance of their functions? Are the children told that the mouth is the focus *par excellence* where the germs of the most serious diseases are developed? Are they ever told that they run the risk of their lives by not brushing their teeth? Unfortunately the teacher is obliged to follow a long and overloaded program for which he or she scarcely has the necessary time, and consequently it is impossible for them to teach their pupils in detail these important points in hygiene.

Brussels has organized a dental service in the public schools since 1875; also Switzerland, to the best of my knowledge, has instituted a similar method, while in many of our own states considerable agitation has been aroused in behalf of such a movement.

It cannot be expected that the workman should be able to defray out of his modest salary the amount required for the treatment and preservation of his children's teeth. Our society should therefore also work for the establishment of dental service to the needy children in our schools. We should point out through talks and lectures the dangers of bad dental hygiene and of mouths in bad condition. Every school should be inspected once a year. The dentists of this society and such other members of the profession that may become interested in the work every year should deliver in the schools lectures on the evolution and principal diseases of the teeth and the dangers accompanying same and should pay special attention to the hygiene of the mouth. This innovation would mean some sacrifice of time and energy to the members, but if we think of the philanthropic and humanitarian side of the question the sacrifice must be considered but small.

### DISCUSSION.

DR. ARTHUR HOLBROOK: This is a most valuable paper, and most timely, and we all appreciate it. It seems to me that this society would do a fine thing if it would take heed of the little message that is conveyed there and in some way utilize it; utilize it by appointing a committee, or using one of the committees of the society to further the purposes put forth in that paper. It is a commendable paper. It is apparent upon its face that it is a valuable paper; it is a practical paper, and appeals to every dentist and every citizen of the state. We can well afford as a society to back it up.

DR. C. L. BABCOCK: I would like the opportunity to add a

word in praise and commendation of Dr. Stephan's paper, and also to endorse what Dr. Holbrook has said. I believe there is an opportunity for us to do something that would be entirely practical, and entirely within our province to do. I was interested recently in reading in a recent number of the Pacific Dental Journal an account of what some of the dentists in California have been doing along this line. A committee appointed by the society compiled a very brief, compact little pamphlet on the hygiene of the teeth, giving in the simplest and most practical way, and a way that anybody could understand, the things that everybody ought to know about the teeth. Then they secured the co-operation, in some of the cities at least, of the boards of education, and with their consent and approval these little books were put in the hands of all children between the ages of six and twelve in the schools. Now, that was not very much to do, but it was a practical thing. This matter has been spoken of several times in the Odontological Society of Milwaukee, and I believe that some action will be taken by it towards some work of this kind. I think it might be well for this society to either appoint a committee independently, or appoint a committee to confer with others, regarding some systematic method of spreading education of this kind. For my part, I should be pleased to see some positive action taken by this society to-day.

DR. H. L. BANZHAF: I cannot refrain from complimenting the essayist on his very valuable paper. I think that the subject of oral hygiene in the public schools is one that should interest every practitioner of dentistry. It seems to me that as he suggests, the time to begin this education is in the early, tender and impressionable years of childhood. Every dentist present probably knows that we have many cases that come to us of children's difficulties from the age of 6 to 14 where the condition sometimes presented is truly pitiable. It does seem to me that if the teachers in the public schools would co-operate with the Board of Public Health, that much could be accomplished in this direction. Many times upon inquiry we find that the parents have been ignorant and neglectful. Sometimes the plea of poverty is made. They tell us they are too poor to pay for the services of a competent dentist. It seems to me that some practical good could be done along this line. We have in this city two dental infirmaries, both equipped to do just this work. In most large cities a like condition prevails. It does seem to me that if the Board of Health were aware of this condition and knew how much good it could do, a remedy might be found.

DR. E. C. FRENCH: I would like to make a suggestion that I think is a good one, and I believe every dentist outside of the city of Milwaukee will agree with me. We have a good many dentists here, and I think that they would all agree with me that if each one of them would devote along the last week in August or the first week in September a whole week apiece to this charity work, and just have it understood in the papers of your city that the dentists, for the good of the profession and the education of the public, would give a week of their time gratis to supply this demand on the part of the school children, it would be a good thing. I have in a measure done this in our own city. I started in a while ago and put a notice in the paper that I would devote so many Saturday afternoons to examining children's teeth free of charge, that I might be able to gather up some statistics that I might sometime in the future write a paper to present to some of the dental conventions or societies. I was surprised to see how little interest the parents of the city took in regard to that matter. Nearly every child that came to my office was from the families in which I had been doing dentistry. We talk about the ignorance of the parents in regard to the children's teeth. It is true, and I have been for thirty years trying to educate them; and I am getting tired of it. By the time you get one educated there are 400 more come up that don't know anything about it, and you have got your hands full trying to educate the public. With my patients, where I have families that I have the entire care of their teeth, I get them pretty well schooled; and they send their children to me whenever I say so. But a number of the parents who send their children to my office don't know how many teeth their children have. I had a row, you might say, the other day, with a patient. A mother came in with a child who had four six-year-old molars, all decayed; you couldn't save them; they had to come out. I said to the mother: "You ought to have brought this child here before." She said: "Why?" I said: "Your child now has lost four of its permanent teeth." She said: "Why no, he hasn't either." I said: "My dear woman, yes." "Well," she said, "those are his first teeth." I said, "I know they are, the first that came there in that place, but they are the last ones." She said: "No, they are not either." I said: "My dear woman, do you know how many teeth your child had in the first set?" "Why," she said, "all of them." I said: "I know it; but what is 'all'?" What is the number of all the first teeth?" Well, she didn't know. Then I said: "Why do you stand here and dispute with me that those teeth that are so badly decayed and have got to come out are the first teeth—or that he is going to get some more in the place of them?"

It took me quite a little while to tell that woman about the teeth; she couldn't tell me when she got the last of the first set, or the first of the permanent teeth. Now, the only practical way that you are going to teach the future fathers and mothers how to care for their children's teeth is to begin to teach it in your public schools. I think one of the ablest papers I ever heard read on the subject of this hygienic care of the mouth in the public schools was written by some doctor from Chicago—I forget his name now—at the Northern Illinois Dental Society two or three years ago this fall; and there was a move made right there in that convention, and a part of the afternoon devoted to that one subject; and the School Board was brought in there and listened to the paper and to the arguments; and one physician who was on the School Board told me that one teacher had taught his child in the school that they had twenty-six teeth in their deciduous set, their milk teeth. I told him I didn't wonder at that. I asked him if the school teacher had been brought up in Elgin, Illinois. He said she had. I said: "It is nothing strange to me that she thought that; it is a wonder to me that you have got anything but milk teeth in Elgin, anyhow, because your city is full of condensed milk factories and things of that kind; you are eating condensed milk and eating condensed tablets and everything else, and it is a wonder to me that they have any teeth down there other than the milk teeth."

But, be that as it may, there is still something farther back of it. Parents come to me and say: "Why, when I was a child my father and mother never had teeth that decayed when they were small; how do you account for it?" We are living now entirely on a different plan from what we did fifty or seventy-five years ago. Our children are fed with food that doesn't require mastication. It all comes to them ground up and sweetened, and you cannot expect anything else. What we want is food of good crusts of bread, something that they have got to chew on. When we can teach the parents to give their children proper food that requires mastication we will overcome a great deal of this. You see children coming to the office now with their gums festooned; their temporary teeth covered up; they want something to knock that down and punch it down where it belongs, and keep at it until they make it stay there. Now, if we can only get up something, circulars or something that everybody could comprehend, written by Dr. Brown here, or Dr. Holbrook, or Dr. Maercklein, or some of these gentlemen who can use good "King's English"—write up some practical article, a little book or pamphlet, and then the dentists here in the city of Milwaukee pay for the publication of it, and publish enough so that

they could send us out in the country enough to give all of our patients and put them in all the schools, then you will have done some good.

DR. B. G. MAERCKLEIN: The gentleman seems to have forgotten that we have done that. This society has done that, at quite an expense.

DR. E. C. FRENCH: Well, I think you have done some good.

DR. B. G. MAERCKLEIN: I would like to hear from Dr. Holbrook.

DR. E. C. FRENCH: I was going to speak on Dr. Holbrook's book. I got a good many of them and some of them are preserved to-day in some of the families of my patients. It was the best thing in the way of a publication for the benefit of the public that this society has ever done, and Dr. Holbrook will ever be held in reverence by those who have seen the benefit of that publication.

DR. ARTHUR HOLBROOK: I simply want to add this little idea. Probably you have all received a pamphlet recently, or you may have read it in some journal. It was by a class-mate of mine in Philadelphia, Dr. D. D. Smith. It is entitled "Prevention." He had taken contracts to preserve the teeth in certain families by the year. Those patients report to him regularly, as often as required; in some cases every two weeks; some cases every four weeks; but whenever he says, they must come. He takes the contract and will keep the teeth in good order; and he says he is successful, without trouble. That simply emphasizes here what Dr. Stephan has so well told us this afternoon. Dr. Smith is an example in the dental profession of what can be done by preventing dental trouble. He is the only one I know of in this country who has undertaken to preserve the teeth without operating upon them, simply by taking care of them, and keeping them clean; prophylactic treatment.

DR. B. G. MAERCKLEIN: I wish to say a word on this subject to accentuate the sentiment that has been expressed; but I also want to branch off on a little side issue. It reminds me of a Frenchman who was standing at the ruins of a man's house, that had been destroyed by fire, and everybody was expressing sympathy for the owner in his great loss. But the expression of sympathy was all that it amounted to. He stood there and listened for a while and he said: "I guess I am sorry; I am sorry about five dollars' worth." He put his hand in his pocket and handed the owner five dollars. This expression of ideas in regard to educating the public is about equivalent to the expression of sympathy by the community in this man's loss. Now, I am sorry about five dollars' worth for the community—a little more—and I will put it in a little plainer language.

It has been said that we have educational institutions of this kind in the city, to the number of two. So far as I know, the best and most prominent members of this society are connected with those institutions. I have not been aware of, nor have I ever found, any statute prohibiting any man from being good; nor is there anything in the code of ethics prohibiting a man from being good, or giving his services for charitable purposes. If this society is so largely interested in the welfare of the community, all it will have to do is to organize itself into a committee of one, each member, and say, "I will give," for instance, "one day a month to supervision, instruction and examination—or, at least, give my services at each or any one of these colleges, for the benefit of the poor, or for the benefit of those that are willing to present themselves at that institution." That would be furthering a double purpose. In the first place, serving the public, and in the second place, instructing the students; and in connection with the aid of the students at each of those colleges, we could do very much more work in one day. Statistics are plentiful, and we have more than we know what to do with. How many teeth have statistics ever filled, or saved? Let us get down to work. Now, I am willing to give one day a month, that is twelve days a year, for the benefit of the poor of this city, and render my services in connection with any college that this society will designate. I will superintend or supervise, or do whatever work I can right there, free of charge, and if every member of this society does the same, I think we will have a grand turn-out, and save some teeth, and be able to give some instruction where it properly belongs. We have tried this matter of educating the public by pamphlets, and printing, and spending money. It reaches few, and does some good for the time being; but we have got to keep up this constant agitation before the public, and let each and every man spread that knowledge as well as he can, without particularly publishing it. Or, if the society sees fit, to publish the names, that such and such a person will be at such and such a college, to receive all applicants for work, well and good. I am one of them, and let all the rest do the same. (Applause.) I think we will get more results from one session at these colleges than we have got by pamphlets and educating the public for the last 25 years; at least, that is my opinion of what we have accomplished so far in the other lines.

DR. H. L. BANZHAF: I am willing to put myself on record in

this matter. If I am permitted, I will give one day a month, and go to the College of Physicians and Surgeons, if they will open their doors.

DR. R. E. MAERCKLEIN: I think we have enough infirmaries in the city. I think each man who is in the practice of dentistry has an office and a chair, and there is no reason for anybody else receiving his patients. He can receive them right at his office, say half a day a month, or a whole day; whatever time he is willing to give to it, right in his office. It is not necessary to supply a special place for them. All that is necessary is for this society, or the number which is willing to do that kind of work, to make public announcement that such and such persons will give their time gratis to such people as cannot afford to pay for dental services. I can do that philanthropic work at my office just as well as to go to the college, or to build a special place for that kind of work. I do not see that you have got to have a special place for it.

Some specialist on the eye and ear, at Madison, has announced in the papers that he will give gratuitously, I think, a half a day a month, to anybody that wants to present himself. The dentists of that city can do that all they choose to.

DR. L. J. STEPHAN: Gentlemen, I wish to thank you for the many kind remarks made on the paper. I realize that the time is so far advanced that it is hardly worth while going into any further discussion of the matter, and further realize that the time is too limited to do anything definite in the matter today. I am glad it has awakened sufficient interest to possibly agitate the matter in the future. The suggestions that have been made, I think, all have their value. I think a great deal of philanthropic work can be done in this direction. I feel satisfied that every one of you living in the smaller towns and larger cities throughout this state, with a certain amount of labor, can succeed, in part at least, in bringing about a movement of this kind. It certainly has got to be done individually among the members in their respective abodes. We here in Milwaukee have started a movement among the members of the local society; and hope some day this agitation may be carried further, and that we may be successful in our efforts; and I think eventually a general movement can be brought about that will lead to this end. The only way to start an agitation of this kind, in my mind, seems to be with the proper authorities that have charge of our public institutions of learning, the school boards and boards of health.

## CONCERNING ACESTORIA.

BY WILLARD H. MORSE, M. D., CONSULTING CHEMIST.

*Author of the text-books, "New Therapeutic Agents."*

*Fellow of the Society of Science (London); American Director (1898-1900) of the Bureau of Materia Medica, etc.*

*Acestoria* is distinguished as the *antiseptic anaesthetic, local*.

There may be others, but this is such par excellence.

The formula is before the profession, and it is a thoroughly good formula, scientific and common sense.

If we study it ever so cursorily, we find there the desirable constituents. Taking them altogether, one is convinced before he has ever seen *Acestoria* that it possesses powerful anaesthetic properties. It can scarcely be otherwise. Every constituent has found out its fixed place in therapeutics and there is not one among them that has not been tried and approved with the records in the text-books, the medical press, and weighty papers read before scientific societies.

A powerful combination, we pronounce the words with wholesome respect. A powerful combination, but—there attaches a bit of rational demurrer. Powerful anaesthetics of local employment are not wholly deprived of dangerous qualities. As a rule, they depress. But *Acestoria* does not do this, as there is introduced an ingredient that forbids any such effect.

Experience has not been long mentioned, but it may be placed on record that wherever employed, as directed, no pain has proved rebellious to the treatment. That is certainly honor enough, but it is honor that is brightened by the further statement that those who have employed *Acestoria* never before met with such certain and efficacious results.

This means extraordinary success.

It means an analgesic of the greatest local power possible.

It does not mean simply a diminution of sensibility. It does not mean any mere freezing of the part treated.

It means a very notable advancement in anaesthetic application.

This, *Acestoria*, as employed in the laboratory experiments, possesses the power to dissolve protagon. It does this completely, and purchasing the proper laboratory language—beautifully. Now, of course, protagon is present in the nerve cells and there it is af-



fected by the anaesthetic. That is, the application tends to cause a coagulation of albuminous substances; and in the application it is to be noted that the nerve-tubes momentarily lose their transparency, explaining the anaesthetic as a result of a temporary semi-coagulation of nervous protoplasm.

Understanding this, our appreciation of Acestoria should grow. There are no disadvantages.

A comparatively small quantity is required.

No disagreeable sensations precede the anaesthetic effect.

There is no nausea and vomiting, no discomfort, no bronchial irritation. No nervous function is compromised.

The nitro-glycerin which is present precludes, or at least antagonizes any depression of the heart or the arterial tension. On the contrary, several observers have stated that during anaesthesia an increased systolic energy has been observed.

Again, no inhibitory action of the pneumogastrics ensues. Reflex action is so fully abolished that there can be no paralyzing influence. The anaesthetic effect disappears quickly, without a single disagreeable after-effect. The action manifests itself pleasantly. Several applications can be made without discomfort. No unusual care is required. The effect can be regulated with a nicety, both as respects the intensity and the area.

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#### WAXING UP ARTIFICIAL TEETH MADE EASY.

Take bottom of a greased tin box, put your old scraps of base plate wax in it, melt them up hot, then paint on the wax with artist's paint brush  $\frac{1}{4}$  inch wide. Keep wax hot, and laugh to think how easy you can do it.

I do not know but this is old, but it is original on my part. Never saw anything in print or ever heard anyone mention the thing. If it is new score me 1, for it is the first original idea I ever had.

E. C. FRENCH.

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#### A CASE REPORTED FROM DENMARK.

A young man, having had the misfortune to swallow a plate with two teeth and two clasps, applied to a physician for relief, and the latter, in an endeavor to extract the plate, pushed it from the pharynx into the stomach.

A severe pain soon developed, the physician advised gastrontomy, but first tried the expedient of prescribing a large dose of bread and butter well covered with cotton which soon relieved the pain. Some days later the patient complained of a severe pain in region of appendix. After administration of a cathartic the patient was relieved of the plate which, as expected, was entirely enveloped in cotton. This covering allowed the plate to pass through the abdominal track without harm.

*The Danish Monthly for Physicians and Surgeons.* Translated by Otto Plutchow, D. D. S.

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#### EDITOR OF DIGEST SUED FOR LIBEL.

CHICAGO, Dec. 24, 1902.

A suit for twenty-five thousand dollars has been filed against J. N. Crouse, editor of the *Dental Digest*, by the National Medical University, for libeling its dental department.

The National is acting in good faith and is succeeding in its efforts to establish a dental college second to none. No reflection upon its integrity will be tolerated from any source.

(Signed)

JNO. A. WHIPPLE, D. D. S.,  
Dean Dental Department.

L. D. ROGERS, M. D.,  
Registrar.

# NOTICES OF MEETINGS

## CONNECTICUT DENTAL CLUB.

The eighth annual meeting of the Connecticut Dental Club, organized to honor the memory of Dr. Horace Wells, the discoverer of anæsthesia, was held at the Hotel Heublein, in Hartford, Dec. 11. Officers were elected as follows: President, Dr. Henry McManus; Vice-President, Dr. A. C. Fones; Secretary, Dr. Charles McManus.

Dinner was held in a private dining room and several speeches were made. Major Charles T. Wells was a guest of the club. Those present were Dr. C. Fones, Dr. A. C. Fones, Dr. C. W. Strang, Dr. C. B. Griffith, all of Bridgeport; Dr. George O. McLean, Dr. Charles McManus, Dr. James McManus, Dr. Henry McManus, all of Hartford, and Dr. J. T. Barker, of Wallingford.

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## ST. LOUIS DENTAL SOCIETY.

St. Louis Dental Society has elected the following officers for the ensuing year: President, Dr. T. E. Turner; 1st Vice-President, Dr. Herman Prinz; 2d Vice-President, Dr. C. D. Lukens; Corresponding Secretary, Dr. De Coursey Lindsley; Recording Secretary, Dr. J. F. Austin; Librarian, Dr. G. H. Gibson; Treasurer, Dr. J. G. Pfaff.

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## MEETING OF WISCONSIN STATE BOARD.

The semi-annual meeting of the Wisconsin State Board of Dental Examiners will be held at the Hotel Pfister, Milwaukee, Wis., Jan. 26, 1903. All candidates wishing to take the examination to practice dentistry in this state will present themselves at 9 o'clock A. M.

J. J. WRIGHT,  
Secretary.

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## OHIO DENTAL ASSOCIATION

The Ohio Dental Association, at its recent meeting elected the following officers for the ensuing year: President, Dr. J. B. Bow-

man, Columbus; 1st Vice-President, Dr. Jno. S. Stephan, Columbus; 2d Vice-President, Dr. W. M. McLane, Cincinnati; Treasurer, Dr. C. L. Kelly, Hamilton; Secretary, Dr. S. D. Ruggles, Portsmouth; the same Legislative Committee was continued for the next year. This committee made a report on the legislation secured at the last session of the General Assembly, but made no recommendations for the future, such action being deemed unwise.

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#### DENTAL SOCIETY OF THE DISTRICT OF COLUMBIA.

The thirty-sixth annual banquet of the Dental Society of the District of Columbia was held Dec. 12. Dr. M. F. Finly acted as toastmaster. Among those who responded were Drs. Ed. C. Kirk, of Philadelphia; R. Ottolengui, of New York City; G. V. I. Brown, Milwaukee; B. Holly Smith, of Baltimore; V. E. Turner, of Raleigh, N. C.; J. A. Libby, of Pittsburg; H. J. Burkhart, of Batavia, N. Y., and Emery A. Bryant, of Washington, D. C. Among other guests were Drs. D. N. Rush, of Alexandria, Va.; Walter E. Borsham, of Boston; E. J. Tucker, of Roxboro, N. C.; L. Geuse, of Baltimore, and D. M. Gallie, of Chicago.

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#### THE SIOUX CITY DENTAL SOCIETY.

At a meeting of the Sioux City Dental Society the following committee was appointed to take charge of arrangements for the entertainment of the State Board which meets in that city. The committee consists of Drs. Arthur Solvsberg, M. B. Nisbet and S. C. Heath. This committee will confer with the officers of the State Dental Association in regard to their plans for the meeting.

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#### FREEPORT, ILL., DENTAL SOCIETY.

The Freeport Dental Society held a meeting and banquet Dec. 22. The following officers were elected for the ensuing year: President, Dr. E. H. Allen; Vice-President, Dr. C. L. Snyder; Secretary and Treasurer, Dr. E. H. Place.

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#### CLEVELAND, O., DENTAL SOCIETY.

Cleveland Dental Society officers for 1903: President, Dr. S. J. Spargur; Vice-President, Dr. J. M. McDill; Secretary, W. C. Ramaley; Treasurer, Dr. Frank Acker.

## M'LEAN COUNTY DENTAL SOCIETY.

The first annual banquet of the McLean County Dental Society occurred Dec. 15. The following toasts were given:

"Our Aim"—Dr. J. Kasbeer.

"Past, Present and Future"—Dr. E. B. Coen.

"Our Profession"—Dr. G. Sitherwood.

"The Ladies"—Dr. B. M. Van Dervoort.

"The Young Uns"—Dr. O. J. Jarrett.

"The Old Uns"—Dr. J. M. Gallehugh, of Chenoa.

Toastmaster—Dr. F. H. McIntosh.

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## INSTITUTE OF DENTAL PEDAGOGICS.

By unanimous vote of the delegates to the tenth annual meeting of the Institute of Dental Pedagogics, Dr. J. D. Patterson, of Kansas City, was elected president of the organization for the coming year. Dr. H. B. Tilestown, of Louisville, was elected Vice-President, and Dr. W. E. Wilmott, of Toronto, Secretary and Treasurer. The last day's session at the Palmer House was devoted principally to the reading and discussion of papers.

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## EIGHTH DISTRICT DENTAL SOCIETY OF BUFFALO.

The Eight District Dental Society of Buffalo was entertained at its regular meeting Dec. 30, by Drs. Flagg and Mimmack. The meeting was held at the Niagara Hotel. Dr. John Madden was essayist, his subject being "Odontalgia and Its Diagnosis." The discussion was opened by Dr. S. Eschelman.

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## LOS ANGELES DENTAL SOCIETY.

The Los Angeles Dental Alumni elected the following officers for 1903: President, Dr. J. D. Moody; Vice-President, H. D. Reque; Secretary and Treasurer, Dr. G. Maurice Crow; Corresponding Secretary, Dr. J. F. Cook. The above and A. T. Covert constitute the Board of Directors.

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## OHIO STATE BOARD.

The Ohio State Board of Dental Examiners closed its session Dec. 23. Of sixteen applicants, but six passed the examination.

# ITEMS

Dr. Chas. Baker is dead at Atlantic City, N. J.

Dr. L. E. Jones, formerly of Cairo, Ill., is now located at Alton, Ill.

Dr. Wallace, formerly of Garner, is now located at Goldfield, Iowa.

Dr. Graham A. Andrews, a dentist, of Lyons, N. Y., died November 27.

Dr. A. J. Low, formerly of Albion, Ill., is now located at Colfax, Wash.

Dr. F. S. Palmer, formerly of Hays City, is now located at Topeka, Kan.

Dr. H. B. Wescott, formerly of Riverside, Iowa, is now located at Kalona, Iowa.

Dr. J. Greenfield, formerly of Griswold, Ia., is now located at Atlantic, Iowa.

Dr. F. R. Terrell, formerly of Indianapolis, is now located at New Vienna, O.

W. Barnett was fined \$700 for practicing dentistry without a license at Victor, Col.

Dr. L. C. Drake, of Chicago, lost property to the value of \$100 by burglars Dec. 23.

Dr. A. W. L. Gilpin, formerly of Brussels, Ontario, is now located at Michigan City, Indiana.

Dr. G. H. Slyfield, formerly of Waukegan, Ill., died Dec. 9, at San Antonio, Cal., of consumption.

Dr. E. Kramm, of Peoria, lost \$50 worth of gold and other material, through sneak thieves Dec. 4.

Dr. Wm. H. Selbach, a well known dentist of Delphi, Indiana, has been declared sane by the State Board.

Dr. C. J. Cigrand, of Chicago, suffered the loss of \$1,100 in instruments and materials through burglars Dec. 20.

A retort containing nitrate of ammonia exploded in the office of Dr. E. O. Pigeon, Washington, D. C. Damage slight.

A suit brought some time since by Dr. L. J. Hass against the editor of the *Sioux Falls Journal*, Sioux Falls, South Dakota, for slander, has been dismissed.

**New Incorporations.**—Wedglock Tooth Company, Chicago; capital stock \$5,000; general dental supply business; incorporators, Fines E. Roach, A. J. Roach, M. P. Breen.

Dr. C. G. Ely, of Missouri, died at Long Beach, Cal., Dec. 20.

Dr. C. M. B. Moos, formerly of Carroll, Iowa, is now located at Muscatine.

Dr. Eli Collins, an old and well known dentist of Little Rock, Ark., died Jan. 3, aged 76.

Dr. George L. Elliott, one of Detroit's leading dentists, is dead. He was formerly dean of Toronto Dental College.

A vulcanizer exploded in the office of Dr. F. S. Whitaker, in Cleveland, Ohio, Jan. 3, causing considerable damage.

Dr. Charles B. Baker, of Bridgeport, is dead. He had served on the state dental commission for a number of years.

Dr. Harry Guilmyer, of Elkhart, Ind., was convicted of assault and with intent to kill his sweetheart, Miss Lulu Barney.

Dr. William H. Hawley, of Rantoul, Ill., and Mrs. Sadie Rendall, of Kalamazoo, Mich., were united in marriage Dec. 14.

Dr. Walter C. Chapman, of Waterbury, Conn., died of typhoid pneumonia, Dec. 21, aged 26 years. Graduated 1900, Baltimore Dental College.

The body of Dr. Jacob A. Mayer, of New York city, was found in the Harlem river Dec. 8. The police decided that death had been accidental.

Dr. J. C. Brooks, an old time dentist, is again in the harness at Charleston, Ill. He has associated with him Dr. E. Ernest French of St. Louis.

Dr. Jesse Magee, a prominent dentist of Kushville, committed suicide Dec. 29. Dr. Magee is third member of his father's family who has suicided within a year.

Dr. Walter Bebb, a son of the late M. S. Bebb, of Chicago, is assistant in the dental college at Los Angeles where Dr. Kitchen, formerly of Rockford, is a faculty member.

The legislative committee of the Wisconsin State Dental Society met at Milwaukee, Dec. 9, to arrange bill to be presented to the state legislature for passage at this winter's session.

Dr. William Douglass, son of Dr. I. Douglass, of Romeo, Mich., and employed by the Detroit Dental Supply Company, was found dead in bed at Detroit, Dec. 18, from an overdose of chloroform self-administered to induce sleep.

An explosion occurred in a room in the rear of the dental offices used for storage purposes by Drs. O. B. Hayden and E. A. Taylor, of Chicago. The fire is supposed to have started among some chemicals and the heat caused a tank of gas to explode. The total loss was about \$1,500.

The annual meeting of the Luzerne and Lackawanna Dental Association was held in Wilkesbarre, Pa., Dec. 23. Officers were elected as follows: President, Dr. N. C. Myers, of Plymouth; vice president, Dr. Labaugh, Scranton; secretary, Dr. P. J. Meixell, Wilkesbarre; treasurer, Dr. Knox, Scranton.

The engagement of Dr. Bruce D. Schrantz, of Calcutta, India, to Miss Josephine Bates, of Talorville, Ill., is announced.

Dr. G. L. Elliott, formerly of Toronto, and who recently died in Detroit, left his estate of \$15,000 to the Children's Free Hospital in the latter place.

Dr. J. F. Wright, of Clinton, Iowa, one of the oldest and best known dentists in the city, fell dead of heart disease while at work in his office Dec. 18.

The office of Dr. W. K. Ramsey, Fifty-ninth and Halsted, Chicago, was visited by burglars Wednesday evening, December 3, and a large quantity of gold, besides other dental goods were stolen.

The monthly meeting of the Wabash Valley Dental Society was held at Terre Haute, Ind., Dec. 13. Dr. Clarence F. Williams, the president, read a paper on "Antrum Trouble."

Dr. Adam H. Smith, a retired dentist, of York, Pa., and a veteran of the Civil War, was found dead in his stable Dec. 21. He was a graduate of the Baltimore Dental College.

A method of replacing the ordinary anesthetics used in dental surgery by the action of high frequency has been brought out by Messrs. Regnier and Didsbury in Paris. M. d'Arsonval has already shown that high-tension and high-frequency currents have a local anesthetic effect. sul, Dr. Wormann.

The Philadelphia Council's finance committee has recommended, among other appropriations, \$2,000 for a dental ward for the Philadelphia Hospital. Dr. John V. Shoemaker, president of the Board of Charities, made a strong fight for the measure, "because," he said, "the teeth of many of the inmates of the almshouse needed attention."

Almost the full strength of the Institute of Dental Pedagogics, composed of teachers of dentistry from all parts of the United States and Canada, was represented at the recent meeting at the Palmer House. It was the tenth annual meeting. The members visited the dental school of the Northwestern University, the Chicago Dental College, and the Illinois School of Dentistry, after which discussion of papers was begun.

The Aurora Charity Council is having drafted a bill by which it will be left to a dentist as to whether certain children employed in factories are over or under the legal age. The dentist will examine the teeth of the children and issue certificates covering the case of each child examined. Employers are prohibited from employing persons under 16. Senator Evans and Representative Bush will present the bill to the coming session of the legislature.

Dr. Malcolm Ethan Parrott, died Dec. 17 in his home at Brooklyn, N. Y., in his fifty-sixth year. He had practiced dentistry for several years before his graduation from the Jefferson Medical College in Philadelphia, in 1883. He was resident physician and surgeon of the Jefferson Hospital for a short time, and for a year was surgeon of the Red Star Line Steamship Company. He was a member of the Medical Society of the County of Kings, the associated Physicians of Long Island, the Brooklyn Medical Society, the Mutual Aid Association of New York, and was on the staff of the Bushwick Central Hospital. He leaves a widow.



A letter has been received by the clerk of the Superior Court from Karl Beutelrock, of Munich, Germany, against whom State's Attorney Deneen, of Chicago, has brought mandamus proceedings to take away his title of D. D. S. and license. Beutelrock says in the letter that he is too poor to come here to defend himself against the suit and that he cannot afford to get a local attorney. He asks the state's attorney to dismiss the suit and return his diploma and other papers, taken from him in Munich by the American consul, Dr. Worman.

United States Consul Hunt, stationed at Tamatove, Madagascar, has notified the state department that there is a good opening there for an American dentist. Madagascar has an area of 200,000 square miles and the population exceeds 5,000,000. There is but one dentist (a native) in the whole island. The governor-general states that an applicant for license will be exempt from examination. The license fee is \$10 per year and the dentist locating there would be under the control of the board of health. A knowledge of French, although not absolutely essential, would render life more agreeable.

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#### FIRES.

Dr. J. G. Atterberry, Tecumseh, Neb.; loss \$1,100, insurance \$600.

Dr. F. A. Heffner, Monticello, Iowa; loss \$800, insurance \$400.

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#### ORIGIN OF NATIONAL UNIVERSITY.

The National University, consisting at present of three graduate schools, viz., the School of Law, the School of Medicine and the School of Dentistry is the outcome of a recommendation to Congress by President Washington and several succeeding Presidents, that the federal government establish at Washington a national university, having for one of its primary objects "the instruction of our youth in the science of government."

During the presidency of General Grant a serious attempt was made to have Congress act upon the recommendations, and the National University was incorporated under the general incorporation law and its first department, or school, the school of law, was launched.



# EDITORIAL

## THE ODONTOGRAPHIC SOCIETY MEETING.

The fifteenth anniversary of the founding of the Odontographic Society of Chicago occurs in February, and on the 16th and 17th days of that month, the event will be celebrated in a manner which will be notable in the dental world. The various committees have made strenuous efforts to make the occasion national in character, and gentlemen of international reputation have been invited to read papers and to give clinics. These efforts have met with remarkable success, and everything seems to point to an event which will be epochal in the history of the dental profession. The program committee has invited five representative dentists from each state, so that in the clinics, the methods of the whole country may be seen. Thirty-seven states have responded up to date. The papers are not many, but are of unusual interest, coming from leaders of the best thought and purpose in the profession. The essayists are Drs. E. C. Kirk, Philadelphia; R. Ottolengui, New York; W. W. Evans, Washington; A. E. Webster, Toronto; and H. P. Carlton, San Francisco.

The exhibits will be a strong feature of the celebration. Every arrangement for the convenience of exhibitors has been made by the committee in charge. It is expected that a greater number will be present than at any previous meeting, and that the character and variety of display will excel anything hitherto attempted.

Many notable people will be present. Large delegations are coming from several states and everything seems to foretell the biggest dental meeting ever held in this country. A large banquet at the Auditorium will end the anniversary celebration, and those who stay away are likely to miss more profit and pleasure than they can possibly realize.

All railroads have granted a rate of a fare and a third on the certificate plan.

Dr. Geo. B. Perry, chairman of the executive committee, or Dr. C. E. Bently, chairman of the program committee, will be pleased to give any information pertaining to exhibits or program.

## ECHOES FROM THE INSTITUTE OF DENTAL PEDAGOGICS.

There are too few reading men in the profession. They should read the DENTAL JOURNALS, have them bound, indexed and accumulate libraries.—G. V. Black.

The organizers of the Institute of Dental Pedagogics, G. V. Black, D. M. Cattell and T. E. Weeks, were honored by being made life members at the meeting Dec. 30.

The dental profession is greater than any man or set of men.

The origin of dentistry was lost in the mists of antiquity, but recent dentistry dates back only as far as the memory of living men.—W. C. Barrett.

Chicago, the whirlpool of dental activity.—C. E. Bently.

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BIBLIOGRAPHY.

THE FILLING OF TEETH WITH PORCELAIN.—A cloth bound book 9½x6½ of 68 pages, by Walter Wolfgang Bruck, D. D. S., instructor in the Dental Institute of the Royal University of Breslau, and translated from the German by Chas. W. Jenkins, D. D. S., of Zurich. Published by Consolidated Dental Mfg. Co.

The book is designed as a textbook for dentists and students, and has 116 illustrations. Coming at a time when porcelain work is receiving so much attention from the profession, it will no doubt, be a welcome addition to the literature on this subject.

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THE INSTITUTE OF DENTAL PEDAGOGICS.

The Tenth Annual Meeting of the Institute of Dental Pedagogics was held at the Palmer House, Chicago, Dec. 29, 30 and 31, 1902, with the largest attendance in the history of the organization.

There are probably few members of the profession who realize the full importance of this society or the immense amount of good it has accomplished.

Organized ten years since by G. V. Black, D. M. Cattell, T. E. Weeks, and a few others, it has steadily grown in members until it now comprises almost the entire list of dental teachers representing the most prominent colleges in the United States and Canada.

Its work differs from that of the National Association of Dental Faculties inasmuch as it has to do with the Technique and Science

of Dental Teaching. During the ten years of its existence the profession has progressed more than in all the time up to its organization, and this has been brought about in a great measure by the purpose, character and heroic work of this association.

The recent meeting in Chicago was a most enthusiastic and successful one, and much credit is due President Hart J. Goslee and the other officers and committees for the successful termination of their efforts to make this the banner meeting of the Institute.

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#### THE PROPOSED FOURTH INTERNATIONAL CONGRESS.

The AMERICAN DENTAL JOURNAL suggests that the different committees having this matter in hand adjust their personal and factional differences, get in harmony and pull together.

They should not allow unbrotherly sentiments to stand in the way of this noble undertaking.

The coming Odontographic meeting in Chicago will present an excellent opportunity for bringing this about. All members of all committees of all societies will be in attendance (unless prevented by Divine Providence) and the air of harmony and good fellowship which the members of these committees will be made to feel will surely soften their hearts.

The AMERICAN DENTAL JOURNAL tenders its friendly offices as mediator.

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